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MONTHLY REPORT

OF THE

DEPARTMENT OF AGRICULTURE,

FOR

APRIL, 1875.

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MONTHLY REPORT.

DEPARTMENT OF AGRICULTURE,
STATISTICAL DIVISION,
April 19, 1875.

SIR: I respectfully present for publication the matter for the April report, comprising a digest of returns showing the condition of winter-wheat; those illustrating the status of farm-animals at the close of winter, and the diseases and losses of such stock during the past twelve months; the monthly records of prices of farm-products in this country and in Europe; and material from the Divisions of Chemistry, Entomology, and Botany.

J. R. DODGE,
Statistician.

Hon. FREDERICK WATTS,
Commissioner.

DIGEST OF APRIL RETURNS.

WINTER-WHEAT PROSPECTS.

The area in winter-wheat appears to have been increased last fall about 7 per cent. A small portion of this area, partially or wholly destroyed by the severity of winter, will be replaced by other crops; how much, will depend upon the vicissitudes of April weather and the pressure of spring work. The Middle States made a very small increase—2 per cent. in Pennsylvania, 1 in New York, with a decrease of 4 per cent. in Delaware; an aggregate increase of about 135,000 acres. The Southern States, from Maryland to Tennessee, inclusive, have made a large increase, adding half a million acres to an area of three and a half millions. It is largest in Mississippi; 70 per cent. in the counties reported, 42 per cent. in those of Texas, 30 in Arkansas and Tennessee, and 26 in Georgia. Ohio counties return no increase in acreage, Michigan but 1 per cent., Indiana a decrease of 2 per cent., and Illinois an advance of 10 per cent. Missouri has enlarged her area in nearly the same proportion, and Kansas 30 per cent. in the counties reporting. The aggregate increase in acreage planted considerably exceeds a million acres, and with that of California will equal one and a half millions.

The condition of the crop, as far as can be judged by its appearance in April in the more northern latitudes, before the ground is bare and free from frost, is below an average, and far below the status of last spring. In the South generally the prospects are quite flattering, and

the crop secure against all probable contingencies excepting rust. In California a large breadth has been seeded. Prompt germination and vigorous growth have followed the winter-rains. The early-sown area is probably secure, but drying winds and the absence of the latter rains excite apprehensions of failure of late plantings. The States in the valleys of the Ohio and Missouri report inferior condition of wheat, as a result of winter-killing. Those sections in which drought prevented early seeding and sufficient root-development before winter set in, have suffered most. The protection afforded by snow has been exceedingly valuable in all the area north of the thirty-ninth parallel of latitude, the injuries sustained resulting mainly from thawing and subsequent freezing in March. In the Middle States this protection has been more uniform than in the West. The more exposed fields present a brown and lifeless appearance, but the roots are found to be sound, except in patches covered long with ice. Everywhere the superiority of wheat seeded with the drill, and the great advantage of this mode over broadcasting, are conspicuously apparent.

The winter-wheat of New England is a scarcely appreciable quantity. The covering of snow has been deep, and on the coming of April a depth of one to three feet lay upon the few fields sown, from Connecticut to Maine.

In two-thirds of the wheat-growing counties of New York a medium condition of winter-grain, so far as freed from the trammels of snow and frost, is indicated; of the remainder, there are two making reports of inferiority to every one showing superior condition. Some damage by freezing in Monroe has been done in spots where water has stood on the frozen surface. Genesee is one in which the prospect is poor, the ground being frozen in places four feet deep, and winter-killing has been severe in Chautauqua, Madison, and Schenectady. The fall growth in Onondaga was not so good as usual, and only moderate expectations are aroused by spring condition. A disposition is manifested to wait and see what April will do for the crop. In Washington 115 inches of snow in the aggregate are reported. The covering of snow has prevented the almost total destruction of the crop of the State.

Wheat in New Jersey presents an appearance of somewhat less than average promise. In Warren County a good covering of snow has made the prospect in April as good as in December last. In Burlington dry weather in autumn delayed germination and left the plants in poor condition to withstand the severity of winter. Salem and other southern counties make unfavorable returns. A similar state of the crop exists in Delaware.

A fair condition, so far as could be judged, where frosts had disappeared, is returned from twenty-five counties in Pennsylvania, and fully half the remainder report higher than average. An uninterrupted blanketing of snow has generally warded off the effects of severe cold. There have been eighty-five consecutive days of sleighing in Franklin. On the southern slopes of knolls, where the snow has melted, plants are partially destroyed by freezing. In a considerable area of the wheat-breadth the plants are brown, in some instances apparently lifeless, but the roots are mostly alive and comparatively vigorous. The drilled wheat looks well in counties in which broadcast sowing has been followed by winter-killing. The fresh lands are far greener than the old fields, and the soil in best condition in the autumn, bears now a more promising burden than the areas badly cultivated.

There has been a positive injury to wheat, by the severity of the winter, in Maryland. Few counties can claim average condition. A

better appearance than was expected in Washington is reported; there has been much injury in Frederick and Montgomery, and the other wheat-growing counties in Western Maryland. It looks well in Anne Arundel and Queen Anne, and promising in Worcester and Dorchester. In Howard, Prince George's, Calvert, Charles, and Saint Mary's the prospect is not flattering. An absence of snow and the prevalence of sleet in the tobacco-counties has been injurious to wheat-fields.

Returns from sixty-eight counties in Virginia, most of which produce wheat, indicate a condition below average. Of the returns that express a positive opinion, twenty-eight report average, twenty-seven inferior, and nine high condition. Among the more favorable returns are those from Pittsylvania, Middlesex, Spottsylvania, Orange, Madison, Craig, Matthews, Grayson, Henrico, and Greenville. Clarke presents the most unpromising appearance since 1836; in the iron-ore lands crops appear better. The coldest season in twenty-one years is reported from Spottsylvania. The absence of snow is complained of in the lower counties, with frequent and sudden changes of temperature. Clover-fallows in Westmoreland, manured with fish-guano and superphosphate, present a fine appearance, while neglected fields are bare and dry. There is a fair prospect that a more hopeful appearance will be presented in May.

There are fifty-six reports from North Carolina, and in all but four of the counties represented wheat is grown to some extent. A medium condition may be claimed for the whole area, about a dozen counties reporting above average, and as many below. The crop is quite promising in Gaston; 20 per cent. better than usual in Pitt; a good stand in Davie, the early sown being superior; above average on land well prepared in Wake; looks extremely well in Greene; better than for years in Duplin; and gives a fair promise in thirty-three other counties. Farmers are not only giving this crop great breadth, but are paying far more attention to a proper preparation for seeding. In South Carolina but little attention is paid to wheat, and the crop is somewhat below average in condition. It promises well in Greenville, Richland, Barnwell, Edgefield, and Marion.

There is a marked increase of the small area of wheat in the Gulf States, except Florida and Louisiana, where it is scarcely grown at all. Of seventy-four counties reporting in Georgia, fifty-eight refer to the wheat-crop, thirty indicating average prospects, twenty-three superior, and only five inferior condition. In McDuffie the finest condition in six years is claimed; and high expectations are raised in Dooly, Lumpkin, Oglethorpe, De Kalb, Muscogee, Gwinnett, Jefferson, White, Meriwether, Elbert, Spalding, Coweta, Baker, Macon, and Maury. In Alabama the condition is also above average, but few counties give much attention to small grain. The early sown is better than the late, and that sown on uplands better than on bottom-lands, on account of rains and overflows. In Franklin the practice of harrowing wheat promises great results. The crop is quite a promising one in Mississippi, though covering a very small area. In Smith County the wheat prospect is better than for ten years, and in Le Flore five times the area of last year is sown. In Noxubee that grown upon soil fertilized with twenty-five bushels of cotton-seed is vastly superior to that on unmanured fields. Wheat experiments in the northern part of Louisiana are more frequent than usual this year, and more promising.

There are returns from fifty-nine Texas counties, thirty-seven of which produce more or less wheat. Of these there are eighteen indicating average, fifteen superior, and only four inferior condition, which makes

Texas prospects for bread quite flattering. The crop is quite advanced in some sections, standing four feet high in early-sown fields in Fannin, while late seeding is less promising. That sown in the black soil of the wheat region is superior to the growth on other soils. A few spots in several counties appear bare or brown, destroyed by the vicissitudes of winter. In this State, too, it is said that drilled wheat invariably looks better than broadcast. In Arkansas, of thirty-two counties growing wheat, half report average condition, and all but three of the remainder above average, many of them from 20 to 50 per cent. better. Some counties have doubled their wheat-area. Of fifty-five county returns from Tennessee, forty-eight include wheat, twenty-two making it above average, twenty average, and six below. There has been too much rain, and injury to wheat from overflow. Some reporters say they never saw wheat looking so well.

Winter exposure in West Virginia has left the crop in comparatively bad condition; more than half the returns indicating inferiority, while only four give high promise.

Wheat has been injured materially by freezing in Kentucky; about one-fifth of the counties reporting better than usual, the remainder being nearly equally divided between medium and low condition in various degrees of inferiority. On old fields and all thin soils the promise is not flattering; on the richer soils, well cultivated lands, and drilled areas, the prospect is far better. There was not snow enough generally, for the best protection.

The general condition of Ohio wheat is below average, in about the same proportion as that of Kentucky. Considerable areas in flat lands are killed. That grown on the hills in the eastern part of the State is generally in fair condition. In Huron and Erie, where it was well covered, it has a promising appearance. In Sandusky the early sown is the brownest. In many localities where the top is destroyed the roots are found to be alive. In the central and western portion of the State the condition is more variable, according to degree of protection afforded by peculiarities of soil and surface and the protection afforded by snow. In Ashland wheat well put in looks well; in Henry that on sandy soil is promising; in Logan, injured by freezing and thawing, yet much of it well rooted.

Athens: Not so good as last year, but about an average condition. Many fields broadcast sown are greatly injured by freezing and thawing. Drilled wheat stands well. *Ashland:* Although put in with care and showing remarkably well in the fall, the extreme hard winter and scarcity of snow has no doubt materially injured some fields, but to what extent cannot be easily determined till perhaps near the 1st of May. *Scioto:* Wheat has been very badly injured by the severity of the winter, and but little snow to protect it. Present appearances indicate at least 20 per cent. below an average at this season of the year. *Tuscarawas:* Winter wheat and winter rye is in bad condition in consequence of the fits of extreme cold weather upon a bare surface; then again the sudden freezing of pools of water over smooth, flat surfaces and the holding of the same for a length of time, excluding the air to give it life. *Champaign:* Winter wheat is much damaged by the hard freezing and by water lying on it and being frozen on it for so long a time. The ice remained on much of the level land and in low parts of all fields for weeks, entirely killing many large patches in most of the fields. Severe cold killed a considerable part of that which was not covered with ice, it being generally of short growth, caused by the very dry weather last fall at and after sowing time.

Michigan fields were not fully emancipated from icy fetters, the ground being frozen from two to four feet, and as a rule deeply covered with snow; yet, so far as could be seen, a promising appearance was presented. Among the counties reporting quite favorably are Lapeer, Monroe, Macomb, Ottawa, Saginaw, Van Buren, and Shiawassee. That drilled is best.

Nearly half the returns from Indiana are unfavorable, and two-thirds of the remainder are only average. Drought in seeding gave a poor preparation for winter. Wheat is more injured in Ohio County than for nine years previously; is 50 per cent. below average in Scott; makes a very poor show in Washington; badly injured in Jennings; in a large number of other counties the injury is less positively asserted. In Dubois drilled wheat looks positively well; and in Cass and Clinton better prospects are reported than for several years. Specimen extracts of remarks of correspondents are given:

Dearborn: From all accounts and from personal observation, I do not think one acre in fifty of wheat will be left. It may be set down as a total failure. The same is true of what little rye was sown. *Franklin:* Winter wheat looks very badly; little snow and long-continued severe freezing. Barley is an important crop here, yielding generally more money than any other small-grain crop. It appears now to be almost entirely killed by the severe freezing. When the mercury fell below 12° there was no snow to protect grain, and barley will not endure such a degree of cold. Much of the wheat was also killed. *Fulton:* Winter wheat is one-half killed by hard freezing without snow. *Howard:* Wheat and rye have wintered admirably; the snow has disappeared and the wheat looks green and promising; no winter-killing or spewing out as last winter. Prospects 25 per cent. more favorable than last spring. *Marion:* Wheat is in first-rate condition. It has made scarcely any growth yet in consequence of the very protracted cold weather; but it is well set and the roots in a very sound and healthy condition, and I should say that present prospects are decidedly favorable for a good crop. *Ohio:* Wheat and rye are the worst winter-killed that they have been for nine years; from present appearances there will not be more than one-fourth of an average crop. *Ripley:* Winter wheat is looking very poor at this time, it being badly winter-killed from the long, dry, freezing weather, from the 1st of January until the 10th of March, 1875, when we had a deep snow. Before that time there was not two inches of snow altogether. *Spencer:* Fair average condition. We have had a severe winter, and many supposed that wheat was nearly all killed; but since spring has opened it has shown that the suppositions concerning it were erroneous. *Steuben:* Winter wheat comes out very nice. It has started out wonderfully. It was very dry last fall and did not get a good start. *Wabash:* I have examined some fields and find the roots alive, but the top looks bad just now. We have had the longest severe winter that has ever been experienced on the Wabash. Ice was twenty-seven inches thick on the river. *Warren:* Winter wheat is looking fine, and the prospect is good for a full crop. *Washington:* Several of our farmers, last season, sowed their wheat in the month of August; it came up well, and looked very well for a short time. In September it was entirely eaten up by a worm that resembled the army worm. Wheat that was sowed in the fore part of September on good ground, and drilled in, looks well. All the wheat that was sown a little broadcast and harrowed in makes a very poor show; in fact, in some neighborhoods farmers report it all killed. *Wells:* Wheat and rye look unusually well, and is not frozen out. The blades are browned, but the roots are sound.

The appearance of winter grain in Illinois is considerably below an average. The number of counties reporting this month is sixty-nine. Of these forty-eight grow winter wheat, though some of them only a small quantity; of which twenty return below average, nineteen average, and nine above. To avoid repetition, a few extracts concerning wheat have been given; and the following digest of the wheat-returns of this State will illustrate the peculiarities of the situation in April:

Alexander: It has stood better than was anticipated. Early sowing that was drilled or plowed in looks very well, but late sowing, broadcasted and harrowed in, in corn ground, is damaged badly. *Bureau:* Winter wheat and rye prospects splendid. *Crawford:* Badly injured by severe winter. *Cumberland:* Wheat and rye are both in very fair condition apparently. *Clinton:* From present appearances 25 per cent. of the winter wheat killed. *Cass:* Condition of winter wheat 50 per cent. worse than last April; winter rye 25 per cent. worse. *Clark:* Unusually good; never had a better prospect for a good crop. *De Kalb:* Wheat will be almost entirely killed; rye in fair condition. *De Witt:* Better than for some time, especially that which was sown with a drill. The past few days of warm sunshine have developed it wonderfully, and from present indications the harvest will be bountiful. *Effingham:* Wheat and rye as fine as we ever saw it. *Fayette:* Wheat and rye looking well, and the prospect is flattering for a good crop. *Franklin:* A large proportion of our wheat was sown with drills, and with but few exceptions the wheat has come through well. A much larger breadth was sown last fall, and much more pains taken in preparing the ground and putting in the seed, than has heretofore been practiced. *Ford:* Although the winter has

been unusually severe, wheat and rye look well, as far as I have seen or heard. *Grundy:* Winter wheat and rye made a very slim growth before winter set in, owing to dry fall. But the winter and spring thus far have been quite favorable, and these crops are now an average. *Hancock:* Winter wheat is much injured, I would think at this time 50 per cent., but a week or two may lessen this estimate. Rye seems to be unharmed. *Jersey:* Wheat has been injured to some extent, but the season is so backward that the true condition cannot be ascertained. *Johnson:* Owing to the extremely hard winter, the condition of winter wheat is gloomy. There are many fields that were sown broadcast that will not make half an average crop, the wheat plants being frozen out of the ground, winter killed. *Lawrence:* Rye is coming out in fine condition, while wheat is not looking so well. However, the present prospect is more favorable than at this time last year. *Logan:* Wheat is in better condition than average at this time of the year. We have had more snow than usual, which has been a protection to it. Rye in good condition, better than average. *Kankakee:* Better than usual. *Montgomery:* The farmers begin to cry out as usual that wheat is badly winter-killed, but I think from what I can learn that it will come out when warm weather sets in much better than expected. *Mason:* Wheat and rye have recovered greatly by being covered with snow during the month of March. *Macon:* Winter wheat was seriously damaged in early winter, but fields sheltered from the winds look well; as a general crop, poorer than last year. *McHenry:* The condition of winter rye unusually fine, owing to the protection given to it by a constant covering of snow. *Macoupin:* Winter wheat appears to be but little injured. *Massac:* Wheat that was sown broadcast is nearly a failure, not more than one-fourth standing; that put in with drills will be three-fourths of a good stand. *Marshall:* Winter wheat considerably damaged. Rye very poor. *McLean:* Winter wheat and rye were more than average the last of March, but dry weather since has reduced it more than 20 per cent. *Peoria:* Frozen out badly. *Piatt:* Wheat not quite as good as last spring, but where it was sown early and acquired a good growth in the fall it looks well; but little injured by the freezing of winter. Rye about the same as last spring. *Pike:* I am of the opinion that we shall have a crop of wheat. *Pope:* Winter wheat does not give promise of a good crop at the present time. *Pulaski:* Wheat suffered from freezing. *Putnam:* It is generally thought that wheat is mostly killed on account of the severe cold and dry weather in the early part of the winter. No snow fell until in January. *Richland:* The condition of wheat will average well with former years at this season. Fears that it was winter-killed have been dispelled in nearly every case. *Sangamon:* It is thought by most people that the germ is yet alive, and with favorable weather from now it will be a good crop. Rye uncertain yet, but comparative condition, I should say, not more than 75. *Schuyler:* The unusual amount of snow and cold weather—no freezing and thawing, thereby lifting the plants out of the ground—leaves the wheat in unusual good fix at this season of the year. *Stark:* Winter wheat and winter rye do not look well at present, but may improve this month. *Scott:* Farmers feel very despondent about the wheat crop. Some say they will have half a crop; others say one-third; for my own part, I think we cannot tell as yet how it will be. *Saint Clair:* Winter wheat is very good, as we had no February and March freezing and thawing weather to throw it up and freeze it out as it is called, and it now promises a full crop. *Tazewell:* Full average with the past three years. Think the prospect for a good crop above average. *Vermillion:* Wheat and rye went into the winter in bad condition, owing to the drought and chinches, but has come through without injury from freezing, is now growing and doing well, and the indications are that the crop this year will be an average or nearly so. *Warren:* The winter wheat appears to be killed, and rye looks badly. *Wayne:* The comparative condition of winter wheat and rye is good. *Wabash:* Early sown, well put in winter wheat is in good condition. Late and carelessly sown is badly frozen. *Washington:* Winter wheat is looking well. *White:* Wheat is badly frozen out. Had an extremely cold winter, with but little snow. Broadcast-sown is damaged far worse than drilled. *Williamson:* Wheat which was drilled in looks very well. The same may be said of rye, but all of either sown broadcast is nearly a failure. *Woodford:* In poor condition. We have almost abandoned the idea of ever again succeeding in raising either winter or spring wheat.

The Northwestern States, Wisconsin, Minnesota, Iowa, and Nebraska, do not grow winter wheat except in experimental patches. The ground was so well covered with snow in Wisconsin that the small area sown looks better than heretofore. In some counties in Minnesota and Iowa a little was sown with quite as good success as usual. In Appanoose, Iowa, "the drill and the snow have saved the wheat." In Des Moines a new practice has been adopted with good results, that of plowing only as deep as the drill runs and leaving the seed on a solid bed, with about three inches of mellow soil above.

Of fifty-seven counties reporting wheat in Missouri, thirty indicate average condition, twenty-two below, and only five above. The fields

looked quite brown on the opening of spring, a portion of the plants being killed outright, with an indication of vitality of root in a large proportion. The drilled areas are invariably superior to those sown broadcast. A partial thaw in March, with subsequent hard freezing, wrought much injury. Drought in the autumn prevented vigorous growth in some counties, except in the best bottoms and in well-cultivated soils, giving a poor appearance this spring to thin upland areas. Timber shelter has had a favorable influence.

There are forty-three county reports of winter grain in Kansas, of which nineteen are below average, seventeen average, and seven above. Drying north winds have been destructive since the 1st of March, killing much wheat that up to that date gave fair promise. The winter has been spoken of as the hardest ever experienced in Kansas. Some of the new counties return a very promising appearance of wheat. In Cowley a volunteer crop is springing up, which is being harrowed, and expectations are raised of a remunerative yield. The efficacy of the drill is affirmed positively and repeatedly.

Oregon produces very little winter wheat.

California wheat is put in from November to April, or in the rainy season. It cannot be called spring wheat, nor is much of it fall-sown. It is literally winter wheat, sown in winter and grown in part in winter, ripening in spring or early summer. Reports are generally favorable, with the exception that more rain is needed, and drying northerly winds are to some extent injurious. In Stanislaus, on adobe land, wheat looks well; on sandy land a lack of rain threatens to shorten the yield. In San Joaquin, it is in high condition on land summer-fallowed and sown early. Many farmers are pasturing or topping the more luxurious growths. On the west side of the river considerable rain is needed. In Alameda a great breadth is suffering from want of rain. In Contra Costa it is well seeded and growing, but the late-sown is suffering from drought. In Sacramento the crop is forward and promising. It looks well in Amador, though a little dry; is promising in Sutter, but northern winds are rapidly taking the moisture from the soil; and is in good condition in Sonoma, Kern, Nevada, Mendocino, Placer, and other counties.

CONDITION OF CATTLE AND SHEEP.

The status of farm animals for the whole country is fully up to the average of spring condition in a series of years, notwithstanding the remarkable severity of the winter, and far above average, taking into consideration comparative numbers of animals represented by the counties making the best reports. There has been no prevailing disease during the winter in any section. Scarcity of feed that could not be met by better housing and care, or purchased supplies, has been confined within very narrow limits, and though, in the section north of the thirty-sixth degree of latitude, and east of the Pacific slope, the cold weather was of extraordinary intensity and duration, the atmosphere was dry and the temperature comparatively uniform. While this induced more careful shelter and feeding, it stimulated in the animals vigor of appetite and muscle. In some localities in Texas the winter was severely cold and unusually wet, but over the greater part of the State the conditions were favorable for unsheltered and unfed stock. In the remaining Southern States winter rains were more abundant than common, occasioning much depreciation and loss among stock left to find their own shelter and food. On the Pacific slope, especially throughout California, all kinds of sheltered stock were

favored with extraordinary immunity from suffering. The weather was uniformly mild and free from hard storms. The rains were timely and gentle, and pasturage was abundant.

Almost the only drawbacks to the health and thrift of cattle and sheep, in any part of the country, have been the want of proper shelter, care, and feed. Even in sections where, from the combined ravages of droughts, chinch-bugs, and grasshoppers, scarcity of feed has been greatest, and this aggravated by cold of extraordinary intensity and duration, precaution in husbanding resources in hand, and in seasonably providing such others as could be made available either for increasing or saving feed, has resulted in bringing stock through in better condition than in previous milder winters with abundant feed, under indifferent treatment. In Kansas, cattle and sheep are reported in better condition in Leavenworth and Woodson Counties, because, feed being short, special precaution was taken beforehand to prepare for this exigency. In Labette the condition is 25 per cent. better than in the spring of 1874, because "the farmers have made the discovery that other agencies besides feed are required to keep stock in good condition. He who allows his stock to be fed in an open and bleak field, without any shelter, is surprised to find that his feed does not go very far, and that his stock, with an abundance to eat, are always poor and weak in the spring, and have a dull, rough, weather-worn look. The sad lessons of past years and the scarcity of feed in the autumn caused the farmers to prepare good shelter for their stock, and to give them unusual care by regular feeding, watering, salting, and exercise." In Caledonia and Lamoille, in Northern Vermont, under one of the severest winters known, cattle and sheep are in excellent condition, "owing, largely, to the better housing, feeding, and care." For a like reason, in Berkshire, among the mountains in Western Massachusetts, "some cattle with ordinary keeping are fit for beef." Similar reports come from representative localities in all sections visited with extraordinary cold, scarcity, or both.

Returns from the Southern States afford not a few indications that the old practice of making no antecedent preparation for stock in inclement winter-weather is being slowly, but in an annually-increasing ratio, superseded by the more humane and far more profitable economy of suitable protection from cold, storms, and starvation. In Maryland, better shelter and feeding are becoming popular. In North Carolina, cattle and sheep are beginning to receive better shelter and care, and they "show the beneficial results very plainly." In contrast with the losses, and "the pitiable existence" of the surviving, among those left to search out their own food and shelter, "the superior condition of the few cattle and sheep that have been well sheltered attests the sound economy of that treatment." In Clayton, Georgia, cattle and sheep are in improved condition, with fewer losses than formerly, "owing to the fact that farmers are making less cotton and more grain;" and in Troup, the condition is better than for years, and the losses 50 per cent. less, because of increased production of forage and better protection in cold weather. Among the profitable results is specified "not so many naked sheep, and consequently more wool." The return from Kaufman, Texas, furnishes this contrast between the results of care and neglect; while our reporter, whose stock was well provided for, lost only 1 per cent., in the county about 25 per cent. died, "owing to the severity of the winter and the neglect of farmers to provide the hay necessary to carry them through." From Arkansas, where the relative condition of cattle is worse than in any other State, and where losses from exposure and starvation have been extensive, Van Buren reports that, though the winter

has been extremely hard, yet the farmers, in view of a scarcity of feed of all kinds, took the precaution to furnish their stock with better quarters and to feed them with more regularity and care, and therefore have brought them through in good condition and with very few losses. In Tennessee, West Virginia, and Kentucky, farmers are reported as making some progress in the discovery that suitable shelter for stock in winter results in greatly-diminished losses, and a fair condition with less feed.

In all the States north of the Potomac and Ohio, and in Minnesota, stock, being generally housed, has come through the winter in remarkably good condition. Out of four hundred and eight definite returns for the condition of cattle from these States, only sixty-three are below average; and out of four hundred and seventeen for sheep, only forty are below. The reduced condition in these few instances is chiefly ascribed to local scarcity of feed; though, in southern Indiana and Illinois, quite as often to lack of shelter. The returns of condition are tabulated as follows:

States.	Cattle.					Sheep.			
	Counties reported.	Above average.	Average.	Below average.	Not specified.	Above average.	Average.	Below average.	Not specified.
Maine	10	5	4	1	.....	5	3	1	1
New Hampshire	7	3	3	.....	1	3	3	1	.....
Vermont	12	5	7	.....	.....	2	10	.....	.....
Massachusetts	9	4	5	.....	.....	3	4	.....	2
Rhode Island	1	.....	1	.....	.....	.....	1	.....	.....
Connecticut	5	.....	5	.....	.....	.....	5	.....	.....
New York	37	10	27	.....	.....	10	25	1	1
New Jersey	6	1	5	.....	.....	1	3	.....	2
Pennsylvania	43	10	24	9	.....	7	23	8	5
Delaware	1	.....	.....	1	.....	.....	.....	1	.....
Maryland	20	7	12	1	.....	4	13	1	2
Virginia	68	15	33	18	2	21	29	14	4
North Carolina	56	23	20	10	3	14	26	8	8
South Carolina	13	4	4	5	.....	4	5	3	1
Georgia	74	25	20	27	2	27	26	8	13
Florida	14	6	3	4	1	2	5	2	5
Alabama	31	12	11	8	.....	12	7	9	3
Mississippi	26	5	3	16	2	7	7	6	6
Louisiana	18	2	8	6	2	2	9	2	5
Texas	59	19	19	21	.....	19	23	6	11
Arkansas	38	4	10	23	1	7	15	12	4
Tennessee	55	14	19	22	.....	11	34	9	1
West Virginia	35	15	13	7	.....	15	16	4	.....
Kentucky	52	17	25	9	1	18	25	7	2
Ohio	59	17	31	11	.....	17	38	3	1
Michigan	34	4	23	7	.....	6	21	4	3
Indiana	49	17	19	12	1	14	27	7	1
Illinois	69	12	36	17	4	12	32	10	15
Wisconsin	25	3	19	2	1	8	12	2	3
Minnesota	33	6	21	2	4	4	22	1	6
Iowa	58	7	33	16	2	7	35	5	11
Missouri	65	8	17	40	.....	7	35	20	3
Kansas	44	19	19	5	1	5	25	3	11
Nebraska	24	.....	13	11	.....	2	12	2	8
California	22	12	8	.....	2	9	10	.....	3
Oregon	9	2	4	3	.....	1	5	2	1
Total	1,181	313	524	314	30	286	591	162	142

CATTLE.—Returns for condition in all the States foot up as follows: Total, 1,181; above average, 313; average, 524; below, 314; not specified, 30. In classifying returns, those which specify good condition without qualification (as large numbers do) are placed as average, while only those which are characterized by some stronger epithet are placed above. The general condition in the several States is sufficiently indicated by

the table. Returns from the whole northern section of the country, where the winter was severely cold but dry, often refer to the obvious fact that deficient protection increases the demand for feed as well as induces emaciation, weakness, disease, and loss, while good housing and careful feeding insure comfort, health, and thrift, but do not report any local causes affecting condition worthy of special notice. In the South, cattle appear to have suffered more than sheep from the prevalent cold rains. In Virginia, owing to this cause, counties in which cattle receive "no shelter and but little care," generally report bad condition—"poor and weak; reduced to mere skeletons." But there has been no difficulty in securing good condition with proper protection and feeding. In Buckingham, where there has been a decided improvement in management and care, "many are now in good beef," and in Page and other counties, for the same reasons, the condition is above the average. Returns of similar import come from the States farther south. In Texas, though the general condition is above average, in a few counties suffering and deaths, from want of shelter and feed, have been frightful. Titus and Kaufman report that 25 per cent. have been lost from these causes; Rusk, Wood, and Waller, that many have died; Dallas, that the loss has been fearful; and Hamilton, that the prairies are dotted with the carcasses of the dead. On the other hand, in Wilson, cattle have stood the winter remarkably well; in Collin the condition is much better than usual, owing to the dry winter; in Ashley, good beef is being taken from the range; and in De Witt many are fat enough for beef. Arkansas and Missouri report an equally dark side, with no favorable contrast. These two States are the only ones in which a majority of the returns for cattle are below average. In the former State, Garland reports that about one-third of the stock at large and fully one-half of work-cattle have died, nearly all from starvation; Independence, that all are poor and feeble, and many have died through neglect and want of feed; Baxter, that the condition is worse than for many years. In Missouri, Cass, Clay, Lafayette, Washington, and Moniteau are counties reporting very bad condition and heavy losses for want of proper protection and feed. In Iowa the dividing-line between good and bad condition coincides with that between good and bad treatment. The same is true in Tennessee, where the report from Campbell will answer for the State, namely: "Those sheltered from the cold rains look well; those not sheltered, in bad plight." In Kansas and Nebraska, owing chiefly to precaution in storing up prairie-hay, better protection, and more careful feeding—these measures being doubly stimulated by extensive failures of crops and by recollecting losses in the previous winter—cattle have been brought through in a condition above average, and with very much less sacrifice of life, vigor, and flesh than in the winter of 1874. In California, for reasons previously stated, the condition was never before excelled, probably never equaled.

SHEEP.—The condition of sheep is still better than that of cattle. In the table for condition (also in that for losses) counties reporting no sheep worthy of mention are classified with the "not specified," and all simply reporting "good condition" are under the head of "average." For all the States, out of 1,039 definite returns all except 162 are average or above. From the States north of the Potomac and Ohio, with Minnesota and Iowa, but 45 returns of condition are below, while 426 are average or above, and 57 are not specified. Relatively, as with cattle, the poorest conditions are in Arkansas and Missouri, the figures being in the former 7 above, 15 average, 12 below, and 4 not specified, and in the latter, in the same order, 7, 35, 20, and 3. Returns

from Pennsylvania indicate average condition with, few extremes. In Virginia, in counties which practice wintering sheep without shelter, some of the bad results are as follows: In Westmoreland, flocks which started in the winter fat are now thin and in low condition, and though more grain than usual has been fed, some sheep and many lambs have perished; in Greenville they have suffered greatly, while many are losing their wool, and ewes are "too poor and weak to sustain their lambs;" in Northumberland they are also poor, and the loss is 20 per cent. greater than last year, while in Cumberland it is 10 per cent. less, and the condition good, "owing to better protection." Like effects from the same causes are reported from the Carolinas and the Gulf States. In Texas, Crittenden reports that while three-fourths are poor, those properly cared for are in fine condition. In Rusk they do well when fed with turnips and cotton-seed; in Walker their condition is fine, and the lambs are healthy; in Gillespie the good condition is limited to those sheltered and fed on rainy days; in Bee, where the whether has been cold and wet, flocks in sheltered places suffered but little, but on the open plains some lost more than one-half. Dallas, Live Oak, Bexar, and De Witt are among those which return a superior condition.

The following suggestive report is from Laclede, Missouri:

The condition is better than for years. Previously most of the farmers have left their flocks without shelter or sufficient feed, and let wethers, ewes, lambs and all run together the whole year round. The result was that they "had no luck." They raised but few lambs and little wool. But last fall they generally built sheds, and so arranged them that they could separate their flocks. The consequence is that their "luck" has changed. They have raised nearly all their lambs, and the woo-lclip will be much heavier.

In Benton, Iowa, about 5 per cent. have died for want of shelter; also many in Calhoun, and "quite a number of early lambs" in Des Moines. Throughout California sheep are reported as having passed through the winter in a condition of extraordinary thrift. The return from Sacramento states that "the increase of the flocks will be greater this season than ever before known. The lambing season is well past, and good luck is reported everywhere."

LOSSES OF CATTLE AND SHEEP.

As there has been a remarkable exemption from diseases among both cattle and sheep the past winter, losses, except incidental, have resulted almost exclusively from a want of due shelter, feed, and care. The following table affords a condensed, general indication of relative losses in the several States:

States.	Cattle.					Sheep.			
	Counties reported.	Less.	Equal or average.	Greater.	Not specified.	Less.	Equal or average.	Greater.	Not specified.
Maine	10	7	3	0	0	7	3	0	0
New Hampshire	7	5	1	1	0	5	1	1	0
Vermont	12	12	0	0	0	12	0	0	0
Massachusetts	9	8	1	0	0	7	0	0	2
Rhode Island	1	0	0	0	1	0	0	0	1
Connecticut	5	4	1	0	0	3	1	1	0
New York	37	25	10	0	2	24	10	0	3
New Jersey	6	3	2	0	1	2	1	0	3
Pennsylvania	43	28	9	3	3	25	8	3	7
Delaware	1	0	1	0	0	0	1	0	0
Maryland	20	11	6	2	1	10	6	2	2

States—Continued.	Cattle.					Sheep.			
	Counties reported.	Less.	Equal or average.	Greater.	Not specified.	Less.	Equal or average.	Greater.	Not specified.
Virginia	68	45	12	8	3	43	9	10	6
North Carolina	56	32	14	5	5	30	11	5	10
South Carolina	13	7	0	4	2	7	1	3	2
Georgia	74	44	15	13	2	39	16	12	7
Florida	14	5	3	4	2	5	5	1	3
Alabama	31	14	12	4	1	14	13	2	2
Mississippi	26	8	5	9	4	10	5	4	7
Louisiana	18	9	3	4	2	9	4	2	3
Texas	59	31	11	14	3	29	10	9	10
Arkansas	38	10	10	16	2	13	10	10	5
Tennessee	55	31	12	9	3	33	11	8	3
West Virginia	35	21	6	6	2	21	5	6	3
Kentucky	52	29	15	7	1	29	14	8	1
Ohio	59	42	12	5	0	42	13	4	0
Michigan	34	19	11	3	1	18	9	4	3
Indiana	49	25	11	9	4	26	11	8	4
Illinois	69	35	15	13	6	34	15	12	8
Wisconsin	25	11	10	2	1	13	10	1	1
Minnesota	33	20	10	2	1	20	10	2	1
Iowa	58	27	17	11	3	27	15	11	5
Missouri	65	20	8	32	5	24	10	22	9
Kansas	44	33	6	5	2	30	5	1	8
Nebraska	24	11	4	6	3	9	3	5	8
California	22	17	2	0	3	17	2	0	3
Oregon	9	5	2	1	1	3	3	2	1
Total	1,181	654	259	198	70	640	251	159	131

It will be seen by the above table that in 1,111 specific returns for cattle, only 198 report losses exceeding those of 1874; and in 1,050 specific returns for sheep, but 159 are greater.

In New England the per cent. of losses, compared with the previous winter, ranges from 5 to 75 less, except that New London, Connecticut, reports the loss of sheep 10 per cent. greater, while that of cattle was 10 per cent. less. While there is no return of greater loss from New York, Steuben returns 20 per cent., Monroe and Washington 25, and Ontario, Saratoga, and Warren 50 less. In Wyoming, Pennsylvania, the losses were less than ever known; in Northampton and York, none; in Mercer, 50 per cent. less than last year.

In Virginia losses of sheep appear to have exceeded relatively those of cattle; in Northumberland, while the loss of the latter was 5 per cent., of the former it was 30 per cent. greater, ascribed to want of shelter; in Matthews the loss of sheep was unprecedentedly great; in Spottsylvania, greater than usual; in Clarke, 2 to 4 per cent. greater, "owing to blind-staggers, confined almost exclusively to ewes with lamb;" in Frederick, 40 per cent. greater; in Caroline, the loss of sheep and lambs much greater; Greenville reports a loss of cattle and sheep 10 per cent., and Gloucester 15 per cent., greater. On the other hand, the loss is less in Nelson, Charlotte, Patrick, Essex, and Cumberland, by 10 per cent.; in Dinwiddie, 20 per cent.; in Henry, 25; in Smyth and Floyd, 50; and in Craig, 75. In North Carolina, Wilkes reports losses less than in previous years, owing to better sheltering and feeding; in Mitchell, Yadkin, and Lincoln, 10 per cent. less; in Cumberland and Montgomery, 50 per cent. less; in Cherokee, 80 per cent. less. Carteret reports no loss of sheep, but the loss of cattle 125 per cent. greater; in Harnett the general loss was 50 per cent. greater. Barnwell, South Carolina, returns losses double those of the previous year. In Georgia the losses for the whole State were much less than the previous year.

The extremes of variation are great in different localities, according to treatment; in Schley they are 10 per cent. less than any year since the war, owing to better feeding; in McDuffie they are 50 per cent. less than in any winter for ten years; in Heard 50 per cent. less than last year; in Hancock, 75 per cent. less; in Scriven the loss of sheep is 100 per cent. greater, while the loss of cattle is 50 per cent. less; but in Lincoln, while the loss of sheep only equals that of last year, the loss of cattle is 100 per cent. greater. Precisely the same report comes from Santa Rosa, Florida. In Choctaw, Alabama, the loss of cattle was 25 per cent. greater, but the loss of sheep less, "owing to a statute for restraining dogs." From Mississippi, Rankin returns losses 100 per cent. greater than last year; Pike, the loss of cattle much greater than for many years. Hancock reports that the loss of cattle arises wholly from starvation, none of the farmers making any provision for feeding; Amite, that the loss in cattle greatly exceeds that of previous years; Wilkinson, that 10 per cent. of the stock have perished. In Louisiana, Avoyelles reports the loss of both kinds 100 per cent. greater; Washington, of cattle, more than 100 per cent. greater, with an average loss of sheep; in Franklin it was 90 per cent. less; in Madison, 50 less; and Richland, less than ever known.

TEXAS.—*Wood:* Many cattle have died from the severe cold weather; 25 per cent. more have died. *Titus:* Twenty-five per cent. of the cattle have starved to death, and by the time grass rises the loss will reach 33⅓ per cent. *Hunt:* Cattle, 22 per cent greater; sheep 10 per cent. less. *Gonzales:* Much less than usual. *Bell:* Much less than for many years *Angelina:* Cattle, 100 per cent. greater; sheep, equal. *Marion:* Fifty per cent. less. *Cherokee:* Less 50 per cent. *Live Oak:* Less 50 per cent. *Kendall:* Sheep 12½ per cent. greater; cattle, equal. *Coryell:* Less 50 per cent. *Dallas:* Greater 25 per cent. *Blanco:* Less 50 per cent. *Kaufman:* Greater 15 per cent: about 25 per cent. have died. *Collin:* Less 15 per cent. *Falls:* Much less. *Comanche:* Cattle, 80 per cent. less; sheep, 95 per cent. less. *Fannin:* 25 per cent. greater. *Waller:* Cattle, 100 per cent. greater. *Milam:* Loss in flesh, 25 per cent. *Ellis:* Greater 25 per cent.; all from starvation. *Ashley:* More than 90 per cent. less. *Bexar:* Less than for several years. *Panola:* 50 per cent. less.

Jackson County, in Arkansas, reports that nearly 50 per cent. have died. Losses in Tennessee have been comparatively small. In Missouri, scarcity of feed combined with want of due protection and care to make the losses heavy. Kansas is rewarded for the decided improvement reported in the care of farm-stock by greatly diminished losses. Losses in Nebraska, also, notwithstanding unusual cold and scarcity of feed, were less than in the previous winter. In the other States in the Valley of the Mississippi and Ohio, including West Virginia, there were no unusual losses worthy of special notice. In California there were scarcely any losses, and comparatively few in Oregon.

DISEASES OF FARM-ANIMALS.

All kinds of farm-animals during the past year enjoyed a marked exemption from prevalent diseases, with the exception of the class of unknown maladies loosely designated by the term "hog-cholera," which, however, presented a less formidable list of losses than the previous year. The losses from exposure and starvation consequent upon the increased severity of the winter and the failure of food-crops in many sections, are larger in those counties where the policy of merciful treatment of domestic animals has never been understood or practiced. During the past year, even horses and mules, which generally receive better treatment than other classes of farm-animals, have been allowed to perish in increased numbers. The external causes of disease, how-

ever, were much less active than the previous year, and were found most prevalent in those regions where the least care was bestowed upon farm-animals. In our "Extracts from Correspondence" will be found an instance of short-sighted policy in the defeat of the law for the protection of sheep against dogs in a county in Missouri. As long as the majority of farmers in a community can thus be arrayed against their own interests it is idle to expect any remarkable agricultural progress there.

DISEASES OF HORSES.—Horses, like other classes of farm-animals, were generally healthy during the last year, though the severe and protracted winter, with its long confinement and shortening supplies of food, produced more or less abnormal symptoms in the northern sections of the country. The most general type of disease was the catarrhal, which was noticed in all quarters of the Union. This, with other affections of the breathing apparatus, constituted the great majority of the cases of disease reported. The following is a brief classification of the horse-maladies of 1874.

Catarrhal.—The epizootic influenza, commonly called the epizooty, so prevalent two years ago, left traces of its malign influence which still exist in some sections of the country. These are found in close association with the common distemper, which appears to have been aggravated or modified by the results of the former "epizooty." There is a tendency to confound the two types of disease as though it were difficult to distinguish them. Cases of this character occurred in Oxford and Waldo, Maine, and in Addison, Vermont, but with trifling loss. Catarrhal symptoms, sometimes resembling the "epizooty" and sometimes the common distemper, are also noted in Onondaga, Washington, Genesee, Chenango, Ontario, Albany, Delaware, Monroe, and Franklin, New York; in Westmoreland, Bedford, Lancaster, Beaver, Adams, Tioga, and Forest, Pennsylvania; in Frederick, Baltimore, and Saint Mary's, Maryland; in King William, Pittsylvania, Craig, Goochland, and Washington, Virginia; in Yancey, Gates, Mitchell, and Clay, North Carolina; in Lexington, South Carolina; in Laurens, Towns, Liberty, Catoosa, Wayne, Whitfield, Echols, Walker, Wilkinson, and Franklin, Georgia; in Santa Rosa, Florida; in Mobile and Calhoun, Alabama; in Franklin, Mississippi; in East Baton Rouge, Louisiana; in Blanco, Texas; in Sharp, Arkansas; in Johnson, Loudon, Cannon, Jefferson, Fentress, Cocke, and Monroe, Tennessee; in Wirt, Tucker, and Gilmer, West Virginia; in Clarke, Bracken, Grayson, Rockcastle, Adair, and Robertson, Kentucky; in Ashtabula, Noble, Montgomery, Union, Williams, Perry, Adams, Ross, and Champaign, Ohio; in Genesee, Ingham, Kent, Ottawa, Saginaw, and Menomonee, Michigan, in Vanderburgh, Indiana; in Morgan, Illinois; in Washington, Dodge, and Sauk, Wisconsin; in Faribault, Morton, Stearns, and Winona, Minnesota; in Hancock, Iowa; in Jefferson, Miller, Macon, Marion, Pike, Platte, Bates, Christian, Scott, Howard, Holt, Franklin, and Vernon, Missouri; in Johnson, Jackson, and Brown, Kansas; and in San Luis Obispo, California.

Throat and lung affections.—Lung-fever is reported in Franklin lin, Lawrence, and Cambria, Pennsylvania; in Manatee, Florida; in Harris, Texas; in Adair, Kentucky; in Benton, Iowa; in Neosho, Kansas. The glanders affected horses to some extent in Colorado and Matagorda, Texas; in Howard, Arkansas; in Hancock, Tennessee; in Alexander, Illinois; in Buena Vista, Iowa. Farcy was noticed in Henry, Alabama. In Cherokee, Iowa, some cases of swelled throat attracted attention.

Brain-diseases.—Blind staggers, vertigo, &c., were more or less prevalent in Tyrrell, North Carolina; in Bullock, Floyd, and McDuffie, Georgia; in Columbia, Florida; in Tishemingo, Mississippi; in Angelina, Texas, where nearly every case was fatal. Post-mortem examination showed a marked congestion of the brain. This malady was also noted in Garland, Benton, Independence, and Crittenden, Arkansas, in some cases causing a loss of 10 per cent.; in Dyer, Cannon, Cheatham, Fayette, Lauderdale, Haywood, and Robertson, Tennessee; in Calloway, Graves, Hopkins, Livingston, Logan, and Simpson, Kentucky. The mortality in some of the foregoing counties was large. The disease is mostly attributed to feeding worm-eaten corn. It appeared in but one county north of the Ohio River, Pope, Illinois, where three-fourths of the cases terminated fatally. A few cases of cerebro-spinal meningitis occurred in Mercer, Pennsylvania.

Gastric diseases.—Bots, colic, &c., were troublesome in Dooly, Scriven, Henry, Towns, Catoosa, White, and Coweta, Georgia; in Columbia, Florida; in Sebastian, Arkansas; in Wirt, West Virginia; in Logan, Kentucky; in Henry, Ohio; in Clay, Nebraska. In different parts of the South, horses were poisoned by musty corn.

Charbon.—This disease was confined to the Southwest, being reported in Coahoma, Wilkinson, and Holmes, Mississippi. It was especially fatal to mules in Wilkinson, where stimulating and tonic treatment was the most successful. Its greatest prevalence and virulence was in localities where insufficient food was provided and where stinging insects were most annoying. Many protected their animals by the smoke of burning rags, stumps, brushwood, &c. In Holmes carbolic acid and lime constituted a good disinfectant. This disease decimated the working animals of Avoyelles, Louisiana, and destroyed 400 or 500 in East Feliciana, besides large numbers in Madison, West Feliciana, and Jackson. In some localities it was more prevalent than any year since the war.

Miscellaneous.—In Madison, Florida, horses suffered from swallowing sand in cropping the early grasses of spring. Rheumatism in the hinder parts is reported in Wakulla Florida. In Hays, Texas, loin disease has prevailed. "Bighead" and resulting debility are reported in Nicholas, Kentucky, Scott, Missouri, and Stanislaus, California. Buffalo-gnats killed many horses and mules in Madison, Mississippi. Only parts of the county suffered from this nuisance, the pine-timbered sections being free. Pennyroyal infusions were found to be a good preventive, while rubbing the skin with grease or oil was also effective. These insects were also troublesome in Crittenden, Arkansas. In one locality of Fayette, Ohio, the "blackwater" was observed. In Douglas and Cloud, Kansas, the failure of the corn-crop caused wheat to be fed to horses, which it is claimed produced some disturbances in the animal economy. In many other instances, in different parts of the country, improper and insufficient food subjected animals to the operation of disease by reducing their vitality. In York, Maine, horses were "used up."

Several new diseases appeared in different parts of the Union. Unusual symptoms attracted attention in New London, Connecticut, and Union, Pennsylvania, but vanished upon the opening of spring. In Cumberland, Maine, a drooping languor took some animals which subsequently fell into convulsions and died within twelve to twenty-four hours. Some fatality resulted from unknown disorder in Menomonee, Michigan. In Victoria, Texas, horses cut off from their usual winter range by boundary fences grew restless, fell away in flesh, and died in considerable numbers, but whether from disease or starvation, cannot

be ascertained. In Titus, Texas, a singular and incurable malady was observable for the first time. The symptoms were loss of sight, stupor, loss of power to void urine, skin thick, with some eruption on the belly and behind the shoulders, great thirst, hacking cough, constipation, and a general tremor throughout the system. In Columbia, Wisconsin, horses were attacked with swellings at the root of the tongue, discharging great quantities of matter. But one death had een known to result from the disease.

DISEASES OF CATTLE.—From our April reports it is evident that during 1874 no general causes of epizootic or prevailing forms of disease were operative in the country, and that where only very ordinary care in regard to food and shelter was exercised the casualties were very few. Even the long severe winter has given rise to comparatively few complaints as to diseases caused by the depressed vitality of farm animals. The greatest prevalence of disease is found in the Gulf States, where the winter is the shortest. In the New England, Middle, and South Atlantic Coast States the exceptions to general healthfulness are neither numerous nor of serious import. In the inland Southern States, in the West, Northwest, and Pacific States scarcely any forms of "prevalent" disease are noted. The cases mentioned in the following generalization are mostly sporadic and dependent upon local conditions. Among these, neglect of food and shelter is prominent.

Texas fever.—This malady is heard of from points farther east than last year. A few cases, mostly fatal, were noted in Litchfield, Connecticut, and Schenectady, New York, caused by the importation of Texas cattle from the West. Traces of the same malady are found also in McNairy, Tennessee, Boone, Kentucky, Carroll, Illinois, Cass, Missouri, and Furnas, Nebraska. The losses were much less numerous than last year and the disease showed itself at fewer points.

Murrain.—Until some authoritative exposition of cattle diseases shall have been given, embracing the local facts of all parts of the country, statistical inquiry is compelled to tolerate the unmeaning term murrain, which, with its variations, bloody murrain and dry murrain, is used to designate very diverse forms of disease. It is often used to indicate some new or startling types upon their introduction merely from the fact that no other term is suggested. The farmers of Oxford County, Maine, have been startled by some strange symptoms supposed to characterize the dreaded murrain of the West. Gradually this supposition will harden into a popular belief, and another local element of confusion will be introduced into the nomenclature of cattle disease. A disease by this name to a considerable extent affected the cattle in Floyd County, Virginia, and was noticed also in Burke and Stokes, North Carolina, and in Henry, Catoosa, Whitfield, and Walker, Georgia. Dooly gives a partial description of the malady there known as "bloody murrain"—swelling tongue and glands and frequent bloody discharges from the bowels. It is declared to be not contagious. Murrain is also reported in Lawrence, Alabama, and in Pike, Wayne, and Tishemingo, Mississippi; in Amite it swept 25 per cent. of the cattle. It is noted in Howard, Sebastian and Arkansas Counties, Arkansas. A few died in Sauk, Wisconsin. Bloody murrain is reported to a small extent in Saginaw, Michigan and Linn, Oregon. In the last three cases these are the only cases of disease reported in those States.

Black-leg.—This disease, which is present in all portions of the United States, is occasionally so prevalent as to call for special local mention. It made a serious havoc among calves in Pendleton County, West Virginia, last year, during the past winter attacking older cattle, from two

to three years of age, causing numerous deaths. Pendleton and Harrison Counties also report this malady. One herd in Carroll, Illinois, manifested the same symptoms which were also noted in Chippewa and Pope, Minnesota, in Hardin, Iowa, in Harris, Missouri, in Douglas and Howard, Kansas, and in Hall, Dixon, and Lincoln, Nebraska.

Pleuro-pneumonia.—A few cases of this disease appeared in Chester, Pennsylvania. It has prevailed extensively in the vicinity of Baltimore among the milk-dairies that supply that city for several years, and appears to be increasing, both in its range and severity. It generally breaks out about midwinter and lasts until April. It is attributed to the fact that cows are crowded into filthy, ill-ventilated stables. It is reliably stated that cows affected by this disease are sold to meat-peddlers at suspiciously low rates. These reckless triflers with human life do not hesitate to sell this poisoned material to the poorer classes of the people, thus swelling the lists of mortality. In the April report of 1874 the same nefarious practice was noticed by our correspondent in Hudson, New Jersey. It doubtless prevails more or less openly in all our great cities.

Mad itch.—This cutaneous disorder shows itself mainly in the head and neck. The animal endeavors to allay the irritation by rubbing the affected parts against trees, fences, &c.; the hair is rubbed off and the skin lacerated by repeated rubbings, but the pain increases until the animal becomes raving, refuses food, and finally dies in great agony. In Tippecanoe County, Indiana, 140 animals died of this malady, which, however, was limited to a few localities. It was also quite severe in Benton, Missouri, and destroyed a few cattle in one herd in Jefferson, Kansas.

Distemper.—This disorder is reported in Surrey, Wilkes, and Randolph Counties, North Carolina, to a small extent. In Yancey it occurred only among cattle brought from the lowlands. A few cases are also noted in Cherokee and Pickens, Georgia.

Abortion.—A tendency to abortion, especially in dairy cows, is noticed in different parts of the country. It is especially mentioned in Litchfield, Connecticut, and in Orange, New York. In Cattaraugus a dairy of 110 cows, fed upon their own skim milk, thickened with corn-meal, had twenty-three cases of abortion, while none of the neighboring dairies had a single case. A few abortions also occurred in Ashtabula, Ohio.

Milk fever.—In Rockingham a few cows in good condition were taken with milk-fever, caused by neglect of providing food and shelter at calving time. The curative treatment employed aimed at the reduction of inflammation by cooling and cathartic medicines, bathing udders in cold water, &c. The same disorder is also reported in Towns, Georgia. The same disease is probably meant by the term udder disease in the report from De Kalb, Illinois.

Miscellaneous.—In Carteret, North Carolina, some cattle in good condition died of an unknown disease. Some undefined influences in Stanly caused the death of many milch-cows in the last stages of pregnancy. Losses from new and undescribed maladies are also reported in Wayne, Georgia; Santa Rosa, Florida; Perry and Covington, Alabama; and Boone, Kentucky. In La Fourche, Louisiana, a large number, in good condition and with good appetites, died suddenly. They became very weak in the loins, and their blood was found to be thin and watery.

The black-tongue appeared in Dale, Alabama, and Jackson, Louisiana. The "salt-sickness" found no adequate remedy in Orange, Florida, and Garland, Arkansas. An occasional case was observed in Wilkinson,

Mississippi. Foot-diseases are reported in Telfair, Georgia. In Lamar, Texas, sore eyes affected some animals, occasionally destroying sight.

DISEASES OF SHEEP.—Sheep have been comparatively free from disease. But few complaints are heard from New England, and those of rather trivial character. In passing westward the dog nuisance begins to claim attention in New York and Pennsylvania, while from every quarter of the South there comes a wail of despair over the prospective annihilation of sheep-husbandry through the ravages of worthless curs. One facetious correspondent calls this nuisance the "dog-cholera." In the West such complaints are not so numerous or bitter as formerly. A correspondent in Missouri says that the State census shows in his county only 16,000 sheep for 9,000 dogs, a very inadequate provision for the canines. With the exception of lack of food and the long severe winter, which have produced frightful destruction of sheep in some localities, no general disease has been reported. The few local types reported owe their existence largely to lack of food and shelter, and to general neglect. The following is a brief abstract of the cases presented:

Foot-rot.—An occasional case of this disease is reported in Rockingham and Sullivan Counties, New Hampshire. In Berkshire, Massachusetts, it has become chronic, in a mild form, in fine-wooled sheep of high grade. It has been frequently cured, but tends to re-appear. This has caused the farmers to restock their flocks largely with hardier coarse-wooled animals. It is also noted in Onondaga, New York, Salem, New Jersey, and Frederick, Maryland, but is by no means virulent. It appears in Bandera, Texas; in Hardin, Tennessee; in Boyle, Kentucky; and in Champaign, Harrison, Logan, Mahoning, and Warren, Ohio. It appears here to be on the decline, and is mostly confined to fine-wooled sheep, causing an increased use of combing-wool animals. It is reported also in Ottawa, Michigan, Whiteside, Illinois, and in Marion, Iowa.

Rot.—This malady was very destructive in Gloucester, Virginia, and troublesome in Scott, and also in Madison, Wilkes, and Haywood, North Carolina, in Georgetown and Richland, South Carolina, in Catoosa, Whitfield, Bartow, and Murray, Georgia, and in the lowlands of Wilkinson, Mississippi. It also appeared in Harris, Texas, where it destroyed 25 per cent. of the flocks; in Franklin, Arkansas, in Cameron, Meigs, Blount, Monroe, and Jackson, Tennessee; in Grant and Barbour, West Virginia; in Montgomery, Illinois. Our correspondent, in Grant, West Virginia, has found an effective remedy in Scotch snuff.

Scab.—A few flocks in Rockingham and Sullivan, New Hampshire, were troubled with this malady. It was noted also in Suffolk, New York; in Palo Pinto, Red River, Williamson, Collin, Milam, Mason, Galveston, Victoria, Matagorda, and De Witt, Texas; in Benton, Arkansas; in Grant, West Virginia; in Whiteside, Montgomery, Crawford, and Jasper, Illinois; in McLeod, Minnesota; in Marion and Madison, Iowa. In Clinton and Jasper, Missouri, the disease was quite severe, the loss in the former amounting to 25 per cent. It is also reported in Allen, Montgomery, and Riley, Kansas; in Webster, Nebraska; in Kern, San Diego, Del Norte, Amador, Mendocino, Stanislaus, Lake, Santa Barbara, and San Luis Obispo, California; in Douglas, Oregon.

Grub in the head.—This disorder is reported in Carroll, New Hampshire; in New London, Connecticut; in Washington, New York, where 40 died in a single flock of 300; in De Witt, Texas; in Lenawee and Montcalm, Michigan.

Catarrhal diseases.—Distemper, influenza, and other catarrhal affections are reported in Spottsylvania and Prince George, Virginia, in

Yancey and Stokes, North Carolina; in Lewis, Boone, and Boyle, Kentucky; in Franklin, Mississippi.

Miscellaneous.—The goitre appeared among lambs in Ontario, New York. Montgomery, Maryland, lost one-fourth of her lambs from undescribed causes. In Vernon, Missouri, half the lambs dropped died of starvation, their ewes being too emaciated to afford them nourishment. In Greenville, South Carolina, new-born lambs in many cases were abandoned by the ewes.

The staggers appeared in Greenville, South Carolina, and in Montgomery, Illinois. Echols, Georgia, lost about one-sixth of her flocks by "sore-head." Something like "pneumonia" was seen in Mecklenburgh, Virginia. The scours is reported in Wilkes, Georgia, and Smith, Mississippi. In Pope, Arkansas, one flock was afflicted with worms—a lamb eight months old is said to have passed a tape-worm 61 feet long. In Mineral, West Virginia, some sheep died from eating laurel. In Belmont, Ohio, some sheep had parasites in the bronchial tubes. Kenton, Kentucky, lost 200 sheep by the "stiffs." Licking, Ohio, lost 10 per cent. by the "white skin." Winnebago, Illinois, reports "consumption." Flukes in the liver is noted in Douglas, Oregon.

Numerous reports of an unnamed disease have been received. In Schenectady, New York, the flocks were decimated by a disorder characterized by irregularity of the bowels and voracious appetite, in spite of which the animals became very thin. Post-mortem examinations showed the lungs shrunken and full of matter, and the intestines full of lumps and knots. Unknown diseases were more or less destructive in Beaver and Lawrence, Pennsylvania; in Wayne, Georgia; in Coffee, Alabama, where 20 per cent. of the flocks died; in Avoyelles, Louisiana, which lost 25 per cent.; in Fulton, Indiana; in Wright, Minnesota.

Our correspondent in Grant, West Virginia, claims that the Alleghany district of that county is almost impervious to sheep maladies. It is beyond doubt that a very large proportion of the foregoing cases of disease directly result from neglect.

Diseases of swine.—The record of swine diseases, though still formidable, is not equal to that of last year. In the Eastern and Middle States maladies bear, as usual, a smaller proportion to the number of animals, but unpromising symptoms seem to be advancing from the West, creating some alarm in a few localities. In the South the prevalence of epizootic types is still marked by heavy losses, but in the West the scarcity of animals in many counties cut down the number of casualties below last year's.

Cholera.—In the confusion of popular nomenclature this term is made to designate a variety of diseases, a fact prominently noted by several of our correspondents. In Lincoln County, Maine, a new malady destroyed 5 per cent. of the hogs, causing great fears that it might turn out to be the dreaded cholera of the West. In several localities in the Middle States hogs brought from the West have shown abnormal symptoms, which were at once set down as those of cholera. Such indications are reported in Chautauqua, Wyoming, and Chenango, New York; Cumberland, Dauphin, Lancaster, Chester, and Cambria, Pennsylvania. Some counties lost 10 per cent. of the stock of animals, while in others the mortality was nominal. In most cases it is specified that native hogs were free from this infliction. It was somewhat extensive in Maryland. Several farmers in Queen Anne lost

all their hogs. It was more or less prevalent also in Frederick, Baltimore, and Washington. Virginia reports it in Shenandoah, King William, Caroline, Pulaski, Pittsylvania, Spottsylvania, Mecklenburgh, Goochland, Chesterfield, Washington, Rockbridge, Northampton, Floyd, and Bedford. In these counties the scourge was comparatively light, the aggregate loss, in no case, amounting to over 15 per cent. of the animals in a county. In Gloucester the loss ranged from 25 per cent. to 75 per cent. in some sections, though the average of the county was probably not much over 10 per cent. In Rappahannock and Nansemond half the hogs died; in Southampton, 33 per cent.; in James City and Montgomery, 25 per cent. Heavy losses are also reported in some counties of North Carolina. Harnett, Polk, and Perquimans lost 50 per cent. The last county reports this loss under the head of an unknown disease, but it is probable that it was as much entitled to the name of cholera as many cases to which it was applied. Mitchell lost 40 per cent.; Madison and Columbia, 33 per cent.; Chowan and Greene, 25 per cent.; Duplin and Wilkes, 20 per cent.; smaller losses were felt in Lincoln, Gaston, Surrey, Edgecombe, Franklin, Davie, Ashe, Yancey, Yadkin, Wilson, Stanly, Caswell, Hertford, Cumberland, Currituck, Rutherford, Macon, Henderson, Haywood, and Alexander. In South Carolina, Union, Richland, and Williamsburgh lost 10 per cent. or less. In Georgia, Telfair lost 90 per cent.; Lee and Wilkinson, 50 per cent.; Dawson, Milton, Wayne, and Rabun, 33 per cent.; Dooly, Henry, Bullock, Towns, Terrell, Worth, and Montgomery, 25 per cent.; Laurens, De Kalb, Johnson, Effingham, Forsyth, Gwinnett, McDuffie, Catoosa, Pickens, Gilmer, Floyd, Lincoln, Butts, Baker, and Charlton, lost 20 per cent. or less. In Wayne an effective remedy was found in doses of turpentine and laudanum. In Florida, Santa Rosa lost 15 to 20 per cent., and Madison 5 per cent. In Alabama, Lawrence lost 75 per cent.; Dale, 67 per cent.; Crenshaw and Mobile, 50 per cent.; Calhoun, 33 per cent.; Covington, 30 per cent.; Coffee, 25 per cent.; Bibb, Saint Clair, Clarke, Lowndes, Madison, Pike, De Kalb, Bullock, Henry, and Autauga, 10 per cent. or less. In Mississippi, Le Flore and Grenada lost 50 per cent.; Pike, Attala, and Smith report a considerable mortality. In Louisiana, this malady was confounded with the charbon in Washington, where the loss was 50 per cent.; it also raged in East Feliciana, Morehouse, and Bossier. In Texas, Titus lost 60 per cent., and found no effective remedy; Red River and Fannin, 50 per cent.; smaller losses in Smith, Lamar, Kaufman, Harris, Dallas, Blanco, Austin, and Victoria. The range of mortality grows somewhat smaller in the inland Southern States. In Arkansas, Garland and Pulaski lost 50 per cent.; Stone, 20 per cent.; Dallas, Pope, and Sebastian, Howard and Franklin, smaller percentages. In Tennessee, Cocke, Lauderdale, and Sequatchie lost about one-third; Dyer, Marion, Bledsoe, and Hawkins about one-fourth. Smaller losses in Anderson, Lincoln, Campbell, Madison, Sevier, Trousdale, Houston, Loudon, Cannon, Fayette, Meigs, Jefferson, De Kalb, Fentress, Blount, Hardin, Sullivan, Polk, Hancock, Perry, Dickson, Jackson, Macon, Weakley, Robertson, and Montgomery. In West Virginia losses not averaging above 10 per cent. in any case were noted in Wirt, Cabell, Boone, Kanawha, and Mason. In Kentucky the losses were heavier, amounting to 50 per cent. in Mercer and Edmonson; 33 per cent. in Franklin and Pulaski. Smaller mortalities in Jefferson, Cumberland, McLean, Shelby, Boone, Boyle, Carroll, Daviess, Fayette, Graves, Hopkins, Jessamine, Livingston, Lincoln, Logan, Marion, Meade, Simpson, Woodford, Clinton, Johnson, Rockcastle, Monroe, and Adair. North of the Ohio River the losses decrease. Highland, Ohio,

lost 2,000. Montgomery and Fayette lost 10 per cent. Hamilton, Hume, Marion, Sandusky, Van Wert, Butler, and Scioto met with smaller losses. Michigan and Wisconsin report no cases. In Indiana, Pike lost 33 per cent. Brown, Daviess, and Hamilton, 10 per cent. Smaller losses in Jennings, Marion, Martin, Orange, Ripley, Clay, and Franklin. In Cass, 140 hogs from Missouri died, but native hogs escaped infection. In Dearborn, only hogs near the towns were affected. In Illinois about a third of the hogs died in White and Wayne, and about a fourth in Scott, Wabash, De Witt, Logan, and Sangamon. Losses are also noted in Alexander, Pike, Fayette, Johnson, De Kalb, Lee, Saint Clair, Jasper, Crawford, Douglass, Franklin, Jersey, Kankakee, Macoupin, Macon, Mason, Montgomery, Lawrence, Peoria, Piatt, Putnam, Richland, Vermillion, Williamson, Whiteside, Warren, Clark, Edwards, Effingham, Morgan, Scott, and Washington. In several cases it is stated that the disease was first developed in hogs brought from Missouri. In Edwards our correspondent, after several years of success with tartar-emetic as a remedy, finds it no longer effective. Many farmers thought they avoided some of the force of the disease by feeding hogs corn upon the ashes of freshly-burned cobs. The mixture generally used as a preventive and cure in Shelby was one bushel of powdered charcoal, three bushels of wood-ashes, half a bushel of slaked lime, one peck of salt, five pounds of sulphur, and one pound of copperas, kept accessible in an open trough and moistened with swill. No cases are reported in Wisconsin or Minnesota. In Iowa, Cass lost 3,000, and Lucas several thousand; Pottawattamie, $5,000 worth; Tama, 33 per cent. Smaller losses in Adair, Poweshiek, Story, Appanoose, Greene, Marion, Montgomery, Polk, Louisa, Dallas, Decatur, Delaware, Guthrie, Hancock, Hardin, Harrison, Mills, Madison, and Linn. In Missouri the loss averages from 50 to 75 per cent. in Saint Genevieve, and 40 per cent. in Bates, with smaller losses in Jefferson, Macon, Marion, Pike, Christian, Clinton, Nodaway, Boone, Chariton, Iron, Lincoln, Perry, Bollinger, Pemiscot, Moniteau, Holt, Vernon, and Ripley. A trace of cholera was found in Johnson, Kansas. In Spencer, Kentucky, this disease is called by some erysipelas or St. Anthony's fire.

Quinsy.—This malady is reported in Duplin, North Carolina, and Coahoma, Mississippi. In the latter the loss amounted to 20 per cent. The most effective remedy was feeding corn soaked in a solution of copperas. Some losses were felt also in Marion, Kentucky; Bureau, Illinois; Poweshiek and Story, Iowa; and Washington, Missouri.

Red mange.—This disease is reported in Gloucester and Elizabeth City, Virginia; De Kalb, Alabama; Holmes and Tishemingo, Mississippi; Wood, Texas; and Benton, Arkansas. The remedy most popular here was doses twice per week of a teaspoonful of sulphur, alum, and saltpeter. It was also noted in Kanawha, West Virginia.

Miscellaneous.—Franklin, Vermont, lost 10 per cent. of its store-pigs by a new disease characterized by paralysis of the back and hind legs; few recovered. Young pigs also died of undescribed symptoms in Ontario, New York, and Northumberland, Pennsylvania. The thumps were bad in Volusia, Florida, and in Cannon and Union, Tennessee. A few cases of crooked neck terminated fatally in Rappahannock, Virginia. Lice were extirpated in Campbell, Tennessee, by anointing with kerosene. In Caroline, Virginia, a dropsical affection yielded to no remedies. The measles are reported in Cherokee and Chowan. Cotton-seed poisoned some in Jackson, Georgia, and Milam, Texas. Some of our Southern correspondents suspect that to this cause should be referred many cases reported under the head of cholera. In Mont-

gomery, Texas, some died of eating cockle-burs. Lung-fever was noticed in Pike, Ohio, causing a loss of 10 per cent. Some cases of blind staggers occurred in Iowa County, Wisconsin. Kidney-worms were troublesome in Poweshiek, Iowa, and Cass, Missouri. The severity of the winter and the short supply of food were the causes of heavy losses in many parts of the country.

EXTRACTS FROM CORRESPONDENCE.

DESTRUCTION OF SHEEP BY DOGS.—*Randolph, Missouri:* There is one impediment, and *only one*, in the way of making sheep-raising very profitable in our county. It is explained in the universal cry of "Dogs." At an election in January last, upon the acceptance or rejection of a law taxing and killing dogs, there were printed on the tickets, "For a dog-law," and "Against a dog-law." Upon the same tickets were printed the names of candidates for delegates to the convention for revising the State constitution. But the important question of constitutional revision was lost sight of in the bitterness of the contest over the dog-law, which was badly defeated, and that by the farmers themselves, the people of the towns leaving the question to be settled mostly by votes in the rural districts. An old and wealthy farmer, a large sheep-raiser, came to me the morning after the election, and expressed his regret for having opposed the law. His change of feeling was brought about by the fact that during the previous night dogs had killed forty of his fine sheep.

RESULTS OF SWINE-FEEDING.—*Garland, Arkansas:* A pair of China hogs produced 38 pigs, which sold at $20 per pair, bringing $380. Deducting $30 for cost of original pair, $23 for corn, and $48 for hotel-slops, total cost, $101, and there remains a profit of $279.

Hillsdale, Michigan: A neighbor fed 6 hogs one year old, and weighing 1,600 pounds, 25 bushels of ear corn within two weeks, gaining 200 pounds.

PROFITS ON MILK.—*Fairfax, Virginia:* From milk sold in the Washington (District of Columbia) market during 1874, the yield of 27 cows, I received at the railroad-station $1,600, or $59 per cow. They grazed on 100 acres and consumed the wheat-straw produced on 25 acres, fodder from 30 acres of corn, besides 2 acres of broadcast, 15 tons of clover-hay, and 100 bushels of wheat-bran and corn-meal.

Garland, Arkansas: A Durham milch-cow, with calf, cost $50, and consumed, during twelve months, food valued at $73. She yielded during the year 630 gallons of milk, averaging 50 cents per gallon, and worth, in the aggregate, $315. Her calf, one year old, sold for $20. Total receipts, $335; cost of cow and feed, $123, leaving a clear profit of $212.

MANAGEMENT OF THE RYE-CROP.—*Story, Iowa:* But little rye is grown here, but there is more money in it than in corn, if properly looked after. Ten acres sown in the fall (September) make good fall pasture, and an excellent spring pasture for young calves and lambs until June 1. Then take them off and let the grain head. When it is ripe turn on 20 to 26 hogs per acre, and let them eat till they have begun to shrink; then take them off and put them on corn. Two or three bushels per head will make them No. 1 pork hogs. The hogs take

nothing from the rye-field, but add materially to its productiveness. There will be enough rye left in the ground for seed, which will become well rooted, and yield good fall pasture as before. It is only necessary to sow once for all time to come, and I will guarantee the last crops will be the best. It is the safest, cheapest, and most profitable way to manure an old field I ever tried.

COUNTY EXPORTS OF AGRICULTURAL PRODUCTS.—*Smith, Tennessee:* The following estimate is based on inquiries instituted by the subordinate granges of Patrons of Husbandry during the last twelve months: Live stock and their products, $335,960; grain, $71,807; tobacco, $175,000; poultry, eggs, butter, &c., $52,345; total $635,112. Inquiries are on foot to ascertain the amount of our imports. I fear they will be found to balance or exceed our exports, as we manufacture scarcely anything.

FULTZ WHEAT.—*Vinton, Ohio:* The Fultz is doing better than any other variety. Of this we are about to have a fair trial. This year I sold 147 bushels of it for seed, at $1.30 per measured bushel. It weighed 64 pounds per bushel. Other varieties weighed from 56 to 60 pounds, and brought $1.10 by weight.

BAD ECONOMY.—Machine-agents and money-shavers have brought hard times on farmers. Five years since a neighbor, through the persuasion of an agent, purchased a reaper, giving an "iron-clad" note. To meet the payments, he was compelled to borrow money at 2 per cent. per month. This winter he paid off the debt, which, principal and interest, amounted to $525, or ten times the cost of manufacture.

UNPROGRESSIVE FARMING.—*Shelby, Alabama:* Although this county is somewhat *ancient*, its agriculture is very rude and imperfect; it contains but a limited number of *thinking, practical* farmers. When corn-fields have been plowed up for wheat, more than half the corn-stalks are left untouched by the plow. Very rarely is there any shelter for stock, except for horses, and many a faithful cow is allowed to shiver herself away in the beating rains and winds, cowering in the fence-corners. Sheep are often not seen for weeks, and are very unwelcome visitors at the farm-yard, especially during cold, sleeting weather. Everything during farming months is neglected for cotton-patches. Old established farmers in spring are found buying their sweet-potato seed at extravagant prices. A new era, however, seems to be dawning. Farmers are beginning to look around them, to seek for improved agricultural seeds and implements, and to experiment in farming, according to suggestions from reliable agricultural sources.

VALUE OF PURE BONE-DUST.—*Medina, Ohio:* There are two establishments in Cleveland for grinding bones; one asks $20 per ton, and the other $50. The latter accuses the former of adulterating. The one asking $50 will not sell much, for we read in the papers that pure bone-dust can be bought in the eastern cities for $35 to $40 per ton. What is its value on lands needing it?

A CHEAP FERTILIZER.—*Duplin, North Carolina:* Many of our best planters use a compound composed of 60 pounds of sulphate of ammonia, 40 pounds nitrate of soda, ½ bushel of salt, 250 pounds fine ground bone, 250 pounds land plaster, 3 bushels of ashes, and 20 bushels of stable-manure or rich earth. They apply the above amount to 6 acres. Labor in preparing included, it costs about $15. It gives as good results as most of the commercial fertilizers costing $50 per ton.

RESULTS OF SEED-DISTRIBUTION.—*Lee, Mississippi:* Wheat invariably deteriorates; the first crop is always the best; rye holds its own;

oats retrograde; corn of all kinds improves in size of ears, but gets a little later every year. Beans, melons, squashes, pumpkins, and all vines grow better and larger the longer the seed is run in the climate. The first pumpkin-seeds sent me from the Department produced a multitude of small pumpkins; but by planting the seed raised here they have grown larger every year. From the paper of French seed sent me three years ago I have stocked the county with pumpkins superior to any ever tasted here. The little black bunch-bean is prolific, and has become a favorite. The vine and bean improve in size each year. Cabbages of all varieties run to long-legged collards. All kinds of okra improve; melons also improve yearly in quality and size. I have stocked the county with the ice-rind melon sent from the Department, and beat Florida's best. Having found that most persons will not properly attend to the original seeds received from the Department, so as to make a fair test, my plan now is to carefully test every kind sent me, myself, and distribute the seed produced. Having ascertained, by testing, what is good and what is not, I encourage the propagation of the good alone. Though I save seeds by the bushel, propagated from those sent by the Department, I give them away, and have never yet sold one cent's worth.

The upland Peeler cotton-seed sent to me received extra care, and, dry as the season was, the cotton did well. The stalk is large, bolls large and plenty of them, and the lint fine and long. It kept green through all the drought, but it had the very best of land. I intend to save every seed, plant on the best land again, and after further trial will report definite results.

DEPARTMENT SEEDS.—*Waller, Texas:* In answer to some doleful grumblers, who evidently are not supplied with them, I will state that every seed sent from the Department to this office germinates; there has not been a failure from fault of the seed. I have requested my assistants to give special attention to this subject.

DESTRUCTIVE FRESHET.—*Sevier, Tennessee:* We are literally ruined for a year. The oldest inhabitant never dreamed of such a flood. Just think of our little river, (Little Pigeon River,) not more than 50 yards wide, spreading out over a mile, and from 8 to 10 feet deep on the banks.

UNRELIABLE CENSUS-FIGURES.—*Somerset, Pennsylvania:* I desire to call attention to the unreliable statements of the United States census of 1870 in regard to this county. The returns give: of improved land, 16,124 acres; unimproved land, 28,606 acres; other land, 133 acres; total, 44,863 acres. Now this county has in round numbers 500 square miles of territory almost entirely covered with heavy timber, containing at least 300,000 acres of forest area. Again, Jones Township, of this county, is credited with an amount of crop-production in 1869 equal to its entire production since its first settlement.

THE FARMERS' DEPARTMENT.—*Union, South Carolina:* It has given me great pleasure to make known to my brother farmers the efforts which your Department is making in their behalf by disseminating valuable information, by distributing new and improved seeds, and, more than all, by doing manful battle for them against their natural enemies, the factors and manufacturers. It is gratifying to know that there is at least one Department of the Government on our side.

POULTRY-DISEASE.—*Webster, Nebraska:* Though fowls generally have done well, nearly all the roosters in this and the adjoining counties are dead. They did not die from lack of food, nor did they exhibit any specific symptoms of disease, but naturally "dropped off." We are anxious to know the reason.

DANGER TO STOCK FROM GYPSUM.—*Roanoke, Va.:* There is great danger in turning stock on a grass-field on which plaster has been recently sown, or until the plaster has been taken up either by rain or heavy dews. Two years ago some stock was turned upon a field on the same day on which it was plastered, and they all died in a few hours. There were no indications of "hoven," the stock being in good condition, and the sudden death was believed to be solely the effect of the sulphate of lime.

JUMPING-SHEEP.—*Highland, Va.:* Take a board about 2 feet long, 5 or 6 inches wide, and 1 inch thick. Fasten it to the sheep's neck so that it will come flat against the knees. When the sheep attempt to jump, the board prevents a foot-hold on the fence and throws them back. A few trials satisfy them. The worst jumpers can be cured in this way. Last summer I had nine which were such bad jumpers that no fence could stop them. I fixed them in the way above described and had no further trouble. At the same time the board prevents much running about, and causes them to fatten better. Try it.

THE COTTON-CROP OF LAST YEAR.

Manipulators of cotton-statistics desirous of reducing prices below a rate warranted by the probable production, waged all last season a most mendacious warfare upon the cotton-reports of this Department. Their own estimates are now proved to be not far from a half million bales too high, while the figures of this office are verified with remarkable closeness. The following is from our December report, indicating an aggregate about 300,000 bales less than the crop of 1873, in the very face of an *increase* of receipts, up to December, of more than 300,000 bales:

The cotton-product of 1874, as estimated by our correspondents on the 1st of November aggregates about three and two-thirds millions of bales. The yield per acre is reported less than in 1873 in most of the States. The weather for ripening and gathering the top-crop has been very favorable. The reports are nearly unanimous in stating that the proportion of lint to seed is large. The percentages of last year's aggregate of bales in the principal cotton-States are as follows: Virginia, 89; North Carolina, 89; South Carolina, 92; Georgia, 93; Florida, 100; Alabama, 95; Mississippi, 90; Louisiana, 85; Texas, 90; Arkansas, 60; Tennessee, 57. This result corresponds very closely with the indications of the monthly statements of condition made by the Department. It is larger than that foreshadowed by the Cotton Exchanges. It is as high as an honest rendering of returns warranted on the 1st of November; and though the fine weather since that date may add something to the quantity opened and safely gathered, and the large proportion of lint may swell the aggregate, the *highest estimate that could be based fairly upon these returns could scarcely reach* 4,000,000 *bales.*

The New York Cotton-Exchange sums up the receipts at the ports, up to April 16, 1875, at 3,259,907 bales, against 3,506,942, making a decrease of 247,035 bales. Since December the decline has been continuous and almost unprecedented in its rate. If this decline should stop at this date, which is altogether improbable, the present difference would reduce the total from 4,170,000 bales last year to 3,922,965 bales. Should it continue and the overland receipts make as high a percentage of the whole crop as last year, the crop will exceed, by a very small margin, 3,800,000 bales. With the present indications of an exhaustion of the stock on hand in the interior, it seems scarcely possible that the latter figures can be exceeded except by "doctoring" overland receipts

to break the fall of cotton-statisticians who are self-deceived by their interests.

European authorities, though prone to accept the views of ursine operators, are compelled to acknowledge the unreliability of commercial reports of cotton. The Monthly Circular of Smith, Edwards & Co., of Liverpool, of the date of March 1, makes the following acknowledgment:

The current of feeling in America represents the predominant interests of speculators This year the "bear" interest predominated, and large-crop opinions followed as a matter of course. In former seasons the "bull" interest usually prevailed, hence the crop was usually underestimated. The Agricultural Bureau is, after all, coming out most nearly correct; its reports were treated with contempt most of the season, but next year it will be regarded as an oracle.

A Liverpool letter of April 9 to the statistician acknowledges the verification of our cotton-estimates, and refers, in language of condemnation, to certain "shamefully-edited" commercial journals, in New York and elsewhere, "whose false estimates of the crop, and, we may add, *falsehoods*, have been the cause of a loss of millions of dollars to the cotton-growers."

A correspondent, after referring to the culmination of the increase, which, according to one authority, amounted to 305,290 bales on the 12th of December, and had declined to 225,743 on the 24th of the same month, remarks as follows:

During the following five weeks, from the 25th of December, 1874, to the 29th of January, 1875, the receipts in the ports fell off with the corresponding period of last year exactly 259,000 bales; and on the 29th of January the total receipts stood thus: From 1st September, 1874, to 29th January, 1875, total receipts in ports, 2,530,000 bales. Corresponding date of 1873–'74, 2,540,000 bales.

During the next seven weeks the weekly receipts at the ports as compared with the corresponding receipts of last year were as follows;

	Receipts at ports, 1875.	Receipts at ports, 1874.
	Bales.	Bales.
Week ending February 5	108,000	146,000
Week ending February 12	104,000	131,000
Week ending February 19	97,000	116,000
Week ending February 26	78,000	106,000
Week ending March 5	77,000	95,000
Week ending March 12	63,000	82,000
Week ending March 19	52,000	67,000
Total in seven weeks	579,000	743,000

A total falling off in seven weeks of 164,000 bales, and a steady weekly decline averaging 22 per cent.

These statistics seem most naturally to be the true basis for an estimate of the crop that has not found its way to the ports, or has not been otherwise accounted for.

The crop of 1873–'74 footed up, according to cotton-exchanges, as follows:

	Bales.
Total cotton received at the ports	3,804 000
Total cotton received over land	238,000
Consumption at the South	129,000
Total crop	4,171,000

Now, up to the 19th March, 1874, the total receipts at the ports were 3,283,000 bales, leaving 888,000 to be accounted for further receipts at the ports up to September, for overland cotton, and southern consumption. If, therefore, the seven weeks' steady decline of 22 per cent. be applied to the 888,000 bales accounted for last year, this would give for the present year's cotton-receipts in the ports, overland and southern consumption, from the 19th March to the 1st of September, exactly 692,640 bales; add to this, cotton received at the ports up to the 19th March, 3,109,000 bales, the total crop estimated is 3,801,640. This is certainly

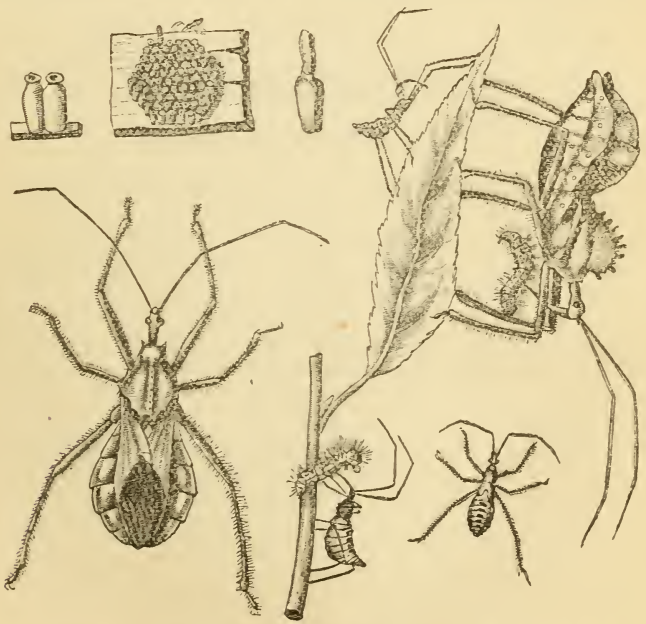
now the most favorable estimate that could possibly be made, while there may reasonably be expected a decrease from this estimate, as the tendency of weekly receipts as compared with last year is toward a decline of the estimated reduction of the assumed 22 per cent. smaller receipts."

From the 19th of March to the 18th of April, the receipts have been 167,642 bales, against 217,090 last year—a falling off of 23 per cent. instead of 22, thus more than sustaining our correspondent's views.

ENTOMOLOGICAL RECORD.

By Townend Glover, Entomolgist.

As horticulturists are very apt to clear their trees in spring of eggs, cocoons, &c., of insects, imagining that they are all injurious to vegetation, it will be well to warn them that some species are beneficial, by destroying injurious insects, and their clusters of eggs should be preserved, wherever found. Among these, a hexagonal mass of eggs will frequently be met with, cemented together with a species of gum or resin, which is said to be gathered from the tree by the female. This insect is commonly known in Maryland by the name of devil's horse, or nine-pronged wheel-bug, *Prionotus cristatus* of Linn., or *Reduvius novenarius* of Say. These hexagonal masses of eggs are deposited on the bark of trees, on fence-rails, under the eaves of out-buildings, or wherever the female chances to be at the time of oviposition, to the number of 70 or more, each egg, when separated from the mass, presenting the appearance of a somewhat square flask, standing on its own bottom. The larvæ when young, are blood-red, with black marks, and do not resem-



ble the adult insect, excepting somewhat in form and habits. The larvæ, pupæ, and perfect insects feed upon all other insects they can overcome, not even sparing their own brethren. When very young, they

destroy great numbers of plant-lice, *Aphides*, and when older, they prey upon caterpillars, or indeed upon any other insect they can overpower. They kill their prey by inserting the proboscis into it, and which emits a most powerful poisonous liquid into the wound. The victim thus pierced dies in a very short time. They then leisurely suck the juices out, and drop the empty skin. The perfect wheel-bug is a large and very singular looking insect, of very slow and deliberate motions when undisturbed, and stealing up to its prey. It is of a gray color, and has a high semicircular ridge or projection on the crest of its thorax, armed with nine perfectly arranged teeth, or cog-like protuberances, like very short spokes or cogs of a wheel; hence the vulgar name of wheel-bug. The young shed their skins several times before attaining their full size. As this insect is constantly employed, from the moment it is hatched, in searching for and destroying noxious insects, it may be considered a friend to the horticulturist and farmer. A dozen or so of these insects, placed near the nest of some of those caterpillars so destructive to our fruit and forest trees, will destroy almost every caterpillar in it in a short time, as they are exceedingly voracious, and each insect will destroy several caterpillars daily. Great care must be taken, however, when handling the adult insects, as they are very apt to sting, or rather, insert their strong curved beaks into the naked flesh, and the poisonous fluid ejected, when the wound is inflicted, is extremely powerful, and much more painful than the sting of a large wasp or hornet. One of these insects having stung the writer, the pain lasted for several hours, and was only alleviated by applications of ammonia. Several days afterward, the flesh immediately surrounding the puncture was so much poisoned that it sloughed off, leaving a small hole in the injured thumb.

CHEMICAL MEMORANDA.

By William McMurtrie, Chemist.

Sugar-corn.—The difficulties accompanying the prosecution of proximate organic analysis of sugar-corn may have been considered sufficient cause for our failure to find upon record any reliable statement concerning its composition, but it appears to be a fact that chemists have thus far either avoided it or have failed to come in contact with it. When called upon a short time ago by Mr. T. Worthington, of Morrow, Warren County, Ohio, for information concerning its composition and comparative value as a material for the manufacture of alcoholic liquors, we found it necessary to resort to analysis to determine the facts desired.

The method employed in our analyses was essentially the same as that made use of in previous analyses of corn as published in the Annual Report of this Department for 1873, the only difference being a slight modification in the separation and estimation of gum and dextrine. Methylic alcohol dissolves dextrine without attacking gum, and we therefore employed it in their separation.

For comparison we have also made an analysis of a sample taken from a lot of corn held by this Department for distribution. There seems to be considerable difference in the composition of these two samples, but this may naturally be expected on account of the different qualities ascribed to the several varieties of this kind of corn. The sweet taste is evidently due to the high percentage of dextrine it contains, and we

should expect to find greater variation in the amount of this constituent than in that of the others, since it is so well known that some varieties of sugar-corn are so much sweeter than others. However, further analyses will be necessary to determine how far this variation extends. The analyses resulted as follows:

No. 1 is a sample from Ohio.

	Air-dried.	Calculated for dry substance.
Moisture	10.00	....
Oil	6.00	6.67
Gum	7.25	8.06
Dextrine	5.20	5.77
Zeine	5.95	6.61
Sugar	1.60	1.77
Starch	50.56	56.17
Albuminoids	7.75	8.61
Cellulose	4.24	4.72
Ash	1.45	1.62
	100.00	100.00

No. 2. Sample obtained in Department.

	Air-dried.	Calculated for dry substance
Moisture	6.40	....
Oil	7.30	7.79
Gum	6.15	6.58
Dextrine	5.15	5.50
Zeine	5.25	5 61
Sugar	1.65	1.76
Starch	49.85	53 27
Albuminoids	10.45	11.16
Cellulose	6.33	6.76
Ash	1.47	1.57
	100.00	100.00

With regard to its value for the manufacture of alcoholic liquors as compared with common field-corn, little can be said in its favor. For comparison in this particular I quote analyses, published in a previous report. In this case the results are calculated for dry substance:

	No. 1.	No. 2
Oil	5.67	6.10
Sugar	1.21	2.66
Gum and dextrine	1.35	1.06
Zeine	2.17	1.58
Starch	77.54	76.50
Albuminoids	8.71	9.09
Cellulose	1.89	1.66
Ash	1.46	1.35
	100.00	100.00

No. 1 represents the composition of a yellow corn grown in Pennsylvania, and No. 2 that of a white corn, from Maryland.

These tables of analyses show that the sugar-corn cannot be recommended for the purpose suggested, since its contents of starch, gum, and dextrine amounts to only 61 and 63 per cent., while that of the field-corn reaches about 72 per cent. With this fact, and its incapability of producing as large a crop as the field-corn, against it, it is doubtful whether sugar-corn will ever have any application other than that which it at present has, viz, for food in the green state.

BOTANICAL NOTES.

By Dr. George Vasey, Botanist.

Flora of Japan.—The following notes on the flora of a portion of the Japanese Empire, by Mr. Thomas Hogg, who is well known as the introducer of many Japanese horticultural novelties, will be read with interest. The government operations in experimental agriculture, which are alluded to in Yesso, are doubtless those conducted by General Capron, formerly of this Department. The report is communicated to us through the State Department:

A hurried journey through a section of country, however limited, is insufficient to enable the investigator to give anything like a full description of its flora. As the area of country is enlarged, the difficulties of doing so are increased, and a residence of weeks or months combined with frequent journeys becomes necessary, in order to describe with even approximate completeness its floral treasures. It is therefore impossible for me to more than take a hasty glance at the vegetation, as the results of a tour of a few weeks in portions of the islands of Yesso and Niphon.

Occasionally I shall take the liberty of departing in a slight degree from the direct subject of my report to a consideration of the country with reference to its agricultural capabilities and productions, as suggested to my mind during the journey.

The flora of the island of Yesso, though in some respects resembling that of high altitudes on the island of Niphon, still exhibits a marked difference, owing to its higher latitude, isolation, and narrower limits. Its peculiarity in these respects is apparent, in the absence of many trees common throughout Niphon. On no portion of the route over which I traveled, with the exception of the immediate neighborhood of Hakodate, did I find growing, in a natural state, either Cryptomerias, Pines, Retinospora, Planera, or the Wistaria. Those seen at Hakodate were probably grown from seed or young trees brought from other districts. On the high hills, at the base of which Hakodate is situated, are found growing a species of Tilia, resembling, if not identical with, *T. europœa*, *Pyrus aucuparia* (?) *Hydrangea paniculata*, *Berberis vulgaris*, and several species of Euonymus.

On the level plain northward are found *Wahlenbergia grandiflora*, *Aconitum fischerii*, (?) Also found growing abundantly all over the island, *Lythrum virgatum* and *Cimicifuga racemosa*. Passing over the mountain-ridge toward, Volcano Bay, on the road leading to the town of Moie, on its shores, I first met with the elm and beech plentifully distributed. A species of poplar is also common. It attains a larger size than other trees of the forest, which here are not generally of large growth, owing to the volcanic, thin, gravelly soil.

Crossing over Volcano Bay to Mororan, the first portion of the road leading over the mountain-spurs that terminate abruptly at the sea-side, the variety of forest-timber is increased by the addition of alder, birch, Æsculus, and *Magnolia hypoleuca* in quantity. Descending the mountain-spurs, the road runs close to the beach, and its course is almost devoid of arboreal growth. The most conspicuous plant to be seen is the beautiful *Gentiana pneumonanthe*, (?) with an occasional *Wahlenbergia grandiflora*. Both of these plants apparently find a more congenial home on the eastern than on the western side of the island, where I occasionally met with the first, but with the latter not once.

A short distance from Tomokomia the road turns toward the interior, passing over a flat country, swampy in places, and mostly covered with oak-trees of low growth, the soil being thin and poor. About five ris from the coast more elevated land was reached, and covered with somewhat larger timber. Some of the species, seen on the mountains near the sea-coast, here disappeared, and among others that took their place was the ash, more closely allied to the American than the European species of that tree.

Soon after leaving Chistosi, seven ris from the coast, the appearance of the country improved. Ascending a hundred or more feet, the plateau was of moderately good soil and covered with oak-timber. Approaching Shimamadzer the soil lost its volcanic character, and was apparently fertile, and continued to improve all the way to Satsporo. Oak-timber predominated on this richer land, and attained a good size.

My limited time of four days at Satsporo, portions of which it rained, did not permit an extended investigation of the surrounding country. It presented, however, no features specially different over that which I had already passed. On the drier soil, oak still prevailed, but along water-courses, with a moist soil, there was a dense growth of a variety of trees already enumerated, with undergrowth of dwarf bamboo and shrubs.

Beyond Satsporo, toward the Ishkaro River, the country becomes lower and somewhat swampy. Oak disappears, and elm takes its place. The nature of the soil in all this section of country is shown in the luxuriant crops of farm-produce within the inclosures of recent settlers. Cereals had all been harvested, but later crops, as buckwheat, beans, &c.,

were prospering finely. Undoubtedly the country is capable of abundantly producing cereals, with the exception, perhaps, of maize, which, for its successful cultivation as a farm-crop, may require a warmer climate. Hemp of equally excellent quality, as cultivated elsewhere in Japan, there is every reason to expect would succeed.

Approaching Ishkara, at the mouth of the river of the same name, the soil becomes drier, and the elm less plentiful, the maple and linden, with other trees, taking its place. From Ishkara southward toward Otaranai, along the sandy beach, the vegetation exhibits no remarkable peculiarities. The lower part of the plain, extending from Satsporo to the sea, is a dense growth of scrub or dwarf oak. Immediately bordering the sea the sandy hillocks are covered with *Rosa rugosa*, which is also plentiful on the gravelly soils near Volcano Bay. Its large, fragrant flowers, succeeded by its bright-colored fruit, has rendered it one of the most highly-prized Japanese plants introduced abroad.

Crossing the mountains from Yoichi to Iwanai, in these higher regions, in addition to the catalogue of deciduous trees, we find several species of Abies, or spruce. The most plentiful is *Abies pichta* found also throughout Siberia. Besides these, of lesser growth, among deciduous shrubs are found *Sophora japonica* and *Styrax obassia*, one of the most elegant shrubs in all Japan. *Cercidophyllum japonicum*, a tree of the largest growth, and peculiar to Japan, attains here its greatest size.

The road from Iwanai to Kuromats does not differ in its general character from other portions of the road from Ishkara. Wherever mountain-streams enter into the Japan Sea, there are valleys of alluvial soil expanding in width as they approach the coast. They are susceptible of easy cultivation and of supporting a large population, but at the present time are simply wastes.

The road from Kuromats to Oshmambe, at the head of Volcano Bay, has also the same general features as that from Yoichi to Iwanai. The rugged mountains are covered with the same varieties of trees, and the valleys between them are in places rendered almost impassable by dense thickets of a species of bamboo. The valley extending back from Oshmambe into the interior is equally fertile with those on the west coast, and as equally undeveloped. From Oshmambe to Mori the road follows the shore of the bay, and is comparatively uninteresting in a botanical point of view, within the range of this report, to that passing through the interior of the island.

Before leaving the island of Yesso I cannot refrain from again referring to its agricultural resources. The efforts of the government toward developing them are worthy of praise. Much remains to be done, and the fields of action are even closer at hand than at Satsporo. In the immediate neighborhood of Hakodate the experimental farm cannot but have in time a good influence in improving the modes of cultivation as at present conducted there. The introduction of nutritious grasses for pasture, or hay for horses and cattle, is to be desired in place of the coarse weeds that are gathered to serve the same purpose and in a very insufficient manner. The planting of a larger variety of hard timber useful for purposes of utility, to take the place of inferior woods, in districts not well fitted for the cultivation of crops, would, in course of time, be an additional source of wealth to the country.

At Awomori, on the island of Niphon, we find at once trees peculiar to the island, to which I have already referred as being absent in Yesso, and indicate the milder climate of Niphon. Proceeding farther southward, the change is still more apparent in the growth of various species of Laurus, Osmanthus, Camellia, and ivy; also the pomegranate and Lagerstrœmia, found frequently in the neighborhood of dwellings.

FACTS FROM VARIOUS OFFICIAL SOURCES.

CHAIN-BOATS ON THE NECKAR.—A horse can draw 20 cwt. on a turnpike, 200 cwt. on a railway, and 1,200 cwt. on a canal, says the old proverb. Horse-towage, which has taken the place of the immense wagons formerly used on the Neckar in Germany, annually transports 2,000,000 cwt. An accumulation of freight often causes great delay, and the cost of towage has increased 15 per cent. since 1872. Paddle-wheel steamers and locomotives on the river-bank have both been tried, and found impracticable. It is now proposed to introduce the chain-boats which have proved successful on the Rhine, Neva, Weichsel, and Havel, and which are now or shortly will be placed on the Seine, Rhone, Volga, Oder, Saale, Spree, and Elbe. The system requires a chain laid in the river-bed, which passes over the vessel, being wound on friction-rollers in its course, that are turned by steam-power. The Upper Elbe

is in the hands of a company that paid 5½ per cent. dividend in 1872, and 6½ per cent. in 1873. They have thirteen steam chain-boats, and forty-seven miles laid with chain, and in 1872 transported 2,727,045 cwt. an average of 17 miles, and in 1873 2,945,627 cwt. an average distance of 20.17 miles.

CALIFORNIA TOBACCO.—The early attempts to grow tobacco in California, according to methods in use east of the Rocky Mountains, proved futile; though the plants grew luxuriantly, the product was very indifferent. Within the last three or four years a planter in Santa Clara County, after several years of study and experiment, succeeded in producing a fair merchantable article. A patent was taken out for the new process of culture and preparation, and a company of capitalists was formed for operations under it. The first crop, in 1872, amounted to a few thousand pounds; in 1873 it rose to 500,000 pounds, and to about 1,500,000 pounds in 1874, including other parties using the process under permission. A portion of the crop was from Havana seed adapted to cigar-making, the remainder being from Florida seed, better adapted to pipe-smoking and chewing tobacco. The manufacturers, having no confidence in the quality of the new product, refused to take it, and the company were compelled to manufacture their own material. They are now making 200,000 cigars per month, besides packing about 10,000 pounds of smoking-tobacco. They have recently determined to enlarge their product a million cigars per month, and 1,500 pounds of smoking-tobacco per day. The area suited to the growth of tobacco under this process in California is said to be unlimited.

AMERICAN JUTE.—Mr. E. Lefranc, of New Orleans, who has devoted much attention to the culture of the jute in this country, informs the Department that he has succeeded in raising the first regular crop in America, of which he recently shipped nineteen bales to the markets of Saint Louis and New York, to be tested by the manufacturers. His crop was raised in Plaquemines Parish, Louisiana, and he believes the cultivation of the fiber will be rapidly multiplied by other planters of that section. Mr. Lefranc writes to the Department as follows:

> As explained before, this jute fiber was decorticated from dried plants which had already given their seed. It is the second product of the stalks, and for that reason the staple may not be highly classed in comparison with the India article worked in green. But I have put enough of good quality in the bales to prove that we can advantageously compete against foreign jute. The decorticating machine cleans it more thoroughly and secures a larger quantum of strong filament than the ordinary hand-work of Hindostan. The refuse of the machine is good for paper.
>
> Regarding the economy of this new industry, I am now practically satisfied that the figures of cost I have given in my treatise were sufficiently nigh. Our expenses for cultivation scarcely reach $4.75 per acre; for manipulation, $15. These are still subject to improvement wherever a closer organization can be established.
>
> The yield is also satisfactory. Wherever the stand was normal, we obtained the proportion of one ton per acre. In average the lint is of over two pounds per foot high on the surface of an acre, and the plant averages ten feet in any favorable season, and in rich, moist land.

Mr. Lefranc speaks very confidently of his success in organizing the labor of this new and promising industry. His machine, he says, is actually a producing fact. It works very well, and on dried stalks, which have first furnished their seed, as well as on green plants, thus securing the important result of obtaining both seed and fiber from the crop. The fiber obtained is strong and fine enough to bring from four and a half to five cents a pound, in gold. The faculty of working the plant dried is important, as it extends the manipulating period through the dull winter season, when labor is abundant and cheap. Mr. Lefranc remarks:

The production or yield is as large as the ability of the feeding hands can reach. The bunches of fifteen and twenty stalks engaged at the time are almost instantly transformed into clean filament. Hemp, ramie, hibiscus, and any long fibrous plant are equally well treated by the apparatus, which capacity and power can be increased as to produce tons and tons daily.

These assertions are based on true, practical facts, and as soon as they will be believed and applied in our long-textile growing sections, the country will cease to be tributary for our actual enormous import of foreign staple. From new observations, I can re-assert that ordinary jute growth gives an average of at least one ton per acre of fiber, and that the whole cost of production will not exceed $25. In good, moist land jute grows ten feet in average, and has one-third of its body in fiber. The mower and reaper applied on wheat cut jute perfectly well.

INTERNATIONAL HORTICULTURAL EXHIBITION.—A grand international exhibition, under the patronage of the German Empress and her son the Crown Prince, will be opened at Cologne August 25, and will continue a month. The exhibition will comprise all horticultural plants and productions, except vines and grapes, all kinds of tools, implements, and machinery, and collections in any way connected with rural life and the development of garden culture.

The following classification has been adopted:

I. *Horticulture*, including glass-house plants, open-air plants, fruit-trees and shrubs, cut and dried flowers.

II. *Horticultural productions*, including fruits, fresh, dried, and preserved; produce of vegetable juice and fiber, viz, wine, beer, liquors, oils, rosin, gum, coloring-matter, hemp, cotton, flax, sugar, starch, &c., with manufactures of these substances; rearing of bees and their products; vegetables, fresh, dried, and preserved; seeds of all kinds.

III. *Garden architecture*, including plans and models of gardens, parks, glass-houses, summer-houses, garden furniture, bridges, roads, walks, rock-work, tunnels, grottos, fences, gates, espaliers, &c., with prices of construction.

IV. *Garden decoration*, including fountains, statues, vases, urns, pedestals, borders, beds, flower-baskets and stands, hanging-lamps, illuminating-materials, &c.

V. *Garden tools and machinery*, pumps, water-pipes, conduits, carts, water-engines, spades, hoes, rakes, clippers, flower-pots, labels, surveying and leveling instruments, &c.

VI. *Garden collections*, of woods, seeds, insects, both injurious and beneficial, &c.

VII. *Artificial fruits, flowers, and plants*, singly and in collections.

VIII. *Garden literature*, in all its branches.

Eminent horticulturists of different nations have been solicited to act upon the various juries, and motive-power for machinery will be provided. A lottery will be established for the disposal of articles. Exhibitors must engage to allow their articles to remain to the close of the exhibition, and to receive them within a week after its close.

The general committee in charge of the exhibition consists of leading civil and military officials of the German Empire, of eminent scientific men, and of opulent and respectable private citizens.

NATURE'S RECORD OF DROUGHTS.—A correspondent in McLennon County, Texas, informs this Department that he is examining the annual rings on trees with reference to the effect of very dry seasons upon tree-growth. He has a theory that a series of such seasons may return in regular periodicity, the discovery of which would be of great value to the farmer, since it would enable him to anticipate short crops and, by previous surplus ones, prepare for them. He has selected for his purpose the burr-oak, on some of which he finds a record of the growth of three hundred years. So far as he has traced back human records, he

finds each very dry season marked by rings of extraordinary thinness. He is still tracing back the records of man and nature in the hope of discovering the law above referred to.

EGYPTIAN COTTON.—About nine years ago the Department procured through the United States consul at Alexandria some Egyptian cotton-seed, which was distributed among southern planters. The reports hitherto have been almost invariably unfavorable. The following report from Mr. Savage, of Montgomery, Ala., though late, is worth noting particularly. He says:

Two years ago I procured about a peck of Egyptian cotton-seed from the Department. I planted it by itself in a sixty-acre cotton-field, and found that it was four or five weeks earlier than the native cotton; consequently I had a good crop before the worms made their appearance. I believe if I had had the whole field in Egyptian cotton, I would have made from twenty-five to thirty bales instead of six. Last year (1874) I planted five acres of it, and packed and sold two bales before the other was ready to pick. I consider it 25 or 30 per cent. more prolific than either the Boyd or Dickson cotton.

MARKET-PRICES OF FARM-PRODUCTS.

APRIL, 1875.

The following quotations represent, as nearly as practicable, the state of the market at the beginning of the month:

Articles.	Value.			Articles.	Value.		
NEW YORK.				BOSTON.			
Flour, superfine State.. per barrel.	$4 40	to	$4 70	Flour, western superfine, per barrel.	$4 25	to	$4 50
extra State.....do....	4 85	to	5 40	com. western extras, per barrel.....	5 25	to	5 50
superfine western....do....	4 40	to	4 70	red wheat, good to fancy northwestern, per barrel.	5 50	to	8 00
extra choice western..do....	4 85	to	8 00	white wheat, good to fancy western, per barrel.....	5 75	to	8 00
common to fair southern extras, per barrel.....	4 95	to	5 60	southern family, per barrel.	6 50	to	8 00
good to choice southern extras, per barrel.....	5 65	to	8 00	Corn.....do....	89½	to	92
Wheat, No. 1 spring....per bushel.	1 22	to	1 28	Oats.....do....	70	to	75
No. 2 spring.....do....	1 16	to	1 20	Rye.....do....	95	to	1 00
winter, red, western..do....	1 25	to	1 29	Barley.....do....	1 00	to	1 40
winter, amber, western, per bushel.....	1 25	to	1 29	Hay, eastern and northern. per ton.	14 00	to	21 00
winter, white, western, per bushel.....	1 29	to	1 39	choice western.....per ton.	— —		— —
Rye.....per bushel.	90	to	1 00	Beef, mess.....per barrel.	10 50	to	13 00
Barley.....do....	1 20	to	1 22	Lard, extra mess.....do....	16 00	to	17 00
Corn.....do....	85	to	87	Pork, prime.....do....	17 00	to	17 50
Hay, first quality.....per ton.	18 00	to	23 00	mess.....do....	22 00	to	22 50
second quality.....do....	14 00	to	16 00	Lard.....per pound.	16	to	15½
Beef, mess.....per barrel.	9 50	to	10 50	Butter, N. Y. and Vermont ..do....	18	to	26
extra, mess.....do....	10 50	to	12 00	western.....do....	16	to	25
Pork, mess.....do....	21 75	to	— —	Cheese, New York and Vt. factory, per pound.....	14½	to	16½
extra prime.....do....	16 25	to	16 50	western factory, per pound.	14	to	16½
prime mess.....do....	19 25	to	— —	Sugar, fair to good refining, per pound.....	7⅞	to	8⅛
Lard.....per pound.	14⅝	to	— —	Cotton, ordinary to good ordinary, per pound.....	14	to	16
Butter, western.....do....	14	to	24	low middling to good middling, per pound.....	16¼	to	17¼
State dairy.....do....	16	to	33	Wool, Ohio and Pennsylvania, per pound.....	52	to	54
Cheese, State factory.....do....	14	to	16⅝	Michigan.....per pound.	49	to	52½
western factory.....do....	12	to	15½	other western.....do....	—		—
Cotton, ordinary to good ordinary, per pound.....	14	to	15¼	pulled.....do....	43	to	56
low middling to good middling, per pound.....	16¼	to	17½	combing fleece.....do....	42½	to	66
Sugar, fair to prime refining, per pound.....	7⅞	to	8⅛	California.....do....	20	to	36
Tobacco, lugs.....per pound.	10½	to	13¾	PHILADELPHIA.			
low leaf to medium leaf, per pound.....	12¼	to	17	Flour, superfine.. .....per barrel.	3 50	to	4 00
Wool, American XXX and picklock, per pound.....	58	to	60	Penn., extra to choice, per barrel.....	4 00	to	5 75
American X and XX, per pound.....	48	to	53	western, extra to choice, per barrel..	5 00	to	7 00
American combing, per pound.....	55	to	58	Wheat, white.....per bushel.	1 32	to	1 37
pulled.....per pound.	30	to	50	amber.....do....	1 27	to	1 30
California spring clip..do....	25	to	35	red.....do....	1 20	to	1 28
California fall clip....do....	16	to	23	Rye.....do ...	1 05	to	— —

Market-prices of farm-products—Continued.

Articles.	Value.		
PHILADELPHIA—Continued.			
Barley.....per bushel.	$1 20	to	$1 50
Corn.....do....	82½	to	84
Oats.....do....	62	to	70
Hay, prime baled.....per ton.	21 00	to	22 00
baled, com. to fair, shipping, per ton.....	19 00	to	20 00
Beef, western mess.....per barrel.	7 00	to	8 00
extra mess.....do.....	8 00	to	9 00
Worthman's, city family, per barrel.....	16 00	to	— —
Pork, mess.....per hundred	21 50	to	— —
prime mess.....do.....	19 75	to	— —
prime.....do.....	16 50	to	17 00
Lard.....per pound	14½	to	18
Butter, choice Middle States, per pound.....	23	to	30
choice western...per pound.	18	to	24
Cheese, New York factory..do....	16	to	17
Ohio factory.....do....	15½	to	16
Sugar, fair to good refining do.....	7⅞	to	8⅛
Cotton, ordinary to good ordinary, per pound.....	13⅝	to	15¾
low middling to good middling, per pound.....	16¼	to	18
Wool, Ohio X and XX..per pound.	54	to	54½
other western.....do....	—	to	—
tub-washed.....do....	55	to	62
pulled.....do....	33½	to	50
combings.....do....	—	to	—
BALTIMORE.			
Flour, superfine.....per barrel.	4 25	to	4 75
extra.....do....	5 00	to	6 50
family and fancy....do....	7 00	to	8 00
Wheat, red.....per bushel.	1 22	to	1 34
amber.....do....	1 22	to	1 34
white.....do....	1 25	to	1 35
Rye.....do....	1 05	to	1 08
Oats.....do....	66	to	73
Corn.....do....	79	to	87
Hay, Maryland and Pennsylvania, per ton.....	20 00	to	24 00
Pork, mess.....per barrel	22 00	to	— —
extra prime.....do....	17 00	to	— —
Lard.....per pound.	15	to	15½
Butter, western.....do....	14	to	22
eastern.....do....	16	to	25
Cheese, western factory.....do....	14½	to	16
eastern factory.....do....	15	to	17
Sugar, fair to good refining..do....	7⅝	to	8⅛
New Orleans, grocery grades, per pound.....	8¼	to	9
Tobacco, lugs.....per pound.	8	to	11½
common to medium, leaf, per pound.....	12	to	14
Cotton, ordinary to good ordinary, per pound.....	—	to	15¾
low middling to good middling, per pound.....	16¼	to	16¾
CINCINNATI.			
Flour, superfine.....per barrel.	4 00	to	4 25
extra.....do....	4 70	to	4 90
family and fancy.....do....	5 00	to	6 40
Wheat, winter red.....per bushel.	1 10	to	1 14
hill, (amber,).....do....	1 13	to	1 18
white.....do....	1 15	to	1 22
Rye.....do....	1 12	to	1 15
Barley.....do....	1 00	to	1 40
Corn.....do....	71	to	72
Oats.....do....	60	to	64
Hay, baled, No. 1.....per ton.	19 00	to	21 00
lower grades.....do....	14 00	to	18 00
Beef, plate.....per barrel.	— —	to	— —
Pork, mess.....do...	21 50	to	22 00
Lard.....per pound.	14½	to	15
Butter, choice.....do....	26	to	28

Articles.	Value.		
CINCINNATI—Continued.			
Butter, prime.....per pound	$0 23	to	$0 25
Cheese, prime to choice factory, per pound.....	15	to	16
Sugar, New Orleans, fair to good, per pound.....	8	to	8¼
prime to choice..per pound.	8½	to	8¾
Tobacco, lugs .....do...	20	to	25
leaf .....do...	25	to	40
Cotton, ordinary to good ordinary, per pound.....	13	to	14¼
low middling to good middling, per pound.....	15¼	to	16½
Wool, fleece, common to fine, per pound.....	43	to	47
tub-washed.....per pound.	49	to	52
unwashed clothing....do...	32	to	33
unwashed combing... do...	37	to	38
pulled .....do...	36	to	38
CHICAGO.			
Flour, choice winter extras, per barrel.....	5 50	to	6 75
common to good extras, per barrel.....	4 50	to	5 00
choice spring extras, per barrel.....	4 62½	to	4 75
patent spring...per barrel.	5 00	to	9 00
spring superfine....do....	3 50	to	4 00
Wheat, No. 1 spring..per bushel.	1 00	to	1 03
No. 2 spring.....do....	94⅝	to	96¼
No. 3 spring.....do....	91½	to	91¾
Rye No. 2.....per bushel.	1 00	to	1 01
Barley No. 2.....do....	1 02	to	1 07
Oats No. 2.....do....	55½	to	58
Corn No. 2.....do....	68	to	69
Hay, timothy.....per ton.	17 00	to	19 00
prairie.....do....	13 50	to	16 50
Beef, mess.....per barrel.	8 25	to	— —
extra mess.....do....	9 25	to	— —
Pork, mess .....do....	21 10	to	21 32½
prime mess.....do....	18 00	to	18 25
extra prime.....do....	15 00	to	15 25
Lard .....per pound.	14½	to	14⅝
Butter, choice to fancy.....do....	25	to	31
medium to good...do....	17	to	21
Cheese, good to prime factory, do...	16	to	18
Sugar, New Orleans, common to choice .....per pound.	7½	to	9
Wool, tub-washed.....do....	49	to	58
fleece-washed.....do....	40	to	52
unwashed.....do....	27	to	37
pulled.....do....	42	to	47
SAINT LOUIS.			
Flour, winter, common to choice, per bbl	4 00	to	7 00
Flour, spring.....per barrel.	4 00	to	5 50
Wheat, white winter..per bushel.	1 05	to	1 14
red winter.....do...	1 04	to	1 14
spring.....do...	94	to	98
Corn.....do...	65	to	76
Rye .....do...	1 02	to	1 06
Barley .....do...	1 00	to	1 35
Oats .....do...	60	to	69
Hay, timothy.....per ton.	19 00	to	23 00
prairie ....do...	12 00	to	13 00
Beef, mess.....per barrel.	14 00	to	15 00
Pork, mess .....do...	20 50	to	21 00
Lard .....per pound.	12	to	14
Butter, prime to choice dairy..do..	30	to	33
country-packed.....do..	18	to	27
Cheese, Ohio factory.....do..	13	to	13¼
New York factory .. do..	13	to	13½
Cotton, ordinary to good ordinary, per pound.....	13½	to	14½
low middling to good middling .....per pound	15	to	16

Market-prices of farm-products—Continued.

Articles.	Value.	Articles.	Value.
SAINT LOUIS—Continued.		NEW ORLEANS—Continued.	
Wool, tub-washed.....per pound.	$0 53 to $0 55	Cotton, ordinary to good ordinary.....per pound.	$0 13⅝ to $0 14½
fleece-washed.....do...	32 to 52	low middling to good middling.....per poud.	15½ to 16½
unwashed .....do...	28 to 36	Wool, clear lake.....do...	28 to — —
Tobacco, lug .....do...	10 to 12		
common to shipping leaf..	11 to 15		
NEW ORLEANS.		SAN FRANCISCO.	
Flour, superfine .....per barrel.	5 00 to — —	Flour, superfine.....per barrel.	4 00 to 4 37½
extra.....do...	5 37½ to 6 00	extra.....do...	4 50 to 4 80
family and fancy.....do...	6 00 to 6 75	family and fancy.... do...	5 00 to 5 25
Corn, yellow.....per bushel.	86 to 88	Wheat, California.....per cental.	1 50 to 1 70
white .....do...	86 to 88	Oregon .....do...	1 50 to 1 70
Oats .....do...	74 to 78	Barley.....do...	1 40 to 1 60
Hay, choice.. .....per ton.	29 00 to — —	Oats.....do...	1 55 to 1 80
prime.....do...	24 00 to — —	Corn, white .....do...	1 60 to — —
Beef, Texas.....per barrel.	10 00 to 11 50	yellow .....do...	1 40 to 1 45
western.....do...	14 00 to 16 00	Hay, State .....do...	10 00 to 17 00
Fulton Market.per half barrel.	11 40 to 11 50	Beef, mess..... per barrel.	8 00 to 9 00
Pork, mess.....per barrel.	22 37½ to 23 00	family messp.er half barrel.	6 50 to 8 00
Lard.....per pound.	14½ to 15½	Pork, mess .....per barrel.	22 00 to 23 00
Butter, choice Goshen.....do...	30 to 32	prime mess .....do...	17 50 to 19 00
western.....do...	12 to 22	Lard..... per pound	13 to 17
Cheese, choice western factory.do...	15 to 16	Butter, overland .....do...	20 to 25½
New York cream.....do...	18 to 18½	California .....do...	25 to 30
Sugar, fair to fully fair.....do...	7 to 7¾	Oregon .....do...	20 to 22½
prime to strictly prime.do...	8 to 8½	Cheese.....do...	12½ to 16
clarified, white and yellow. .....per pound.	9½ to 10½	Wool, native .....do...	10 to 20
Tobacco, lugs .....do...	9 to 11½	California .....do...	15 to 22
low leaf to medium..do...	12 to 14	Oregon .....do...	18 to 22

LIVE-STOCK MARKETS.

Articles.	Value.	Articles.	Value.
NEW YORK.		CINCINNATI—Continued.	
Cattle, extra beeves....per cental.	$13 50 to $14 00	Cattle, fair to medium..per cental.	$4 00 to $5 00
good to prime.....do....	— — to 13 25	common.....do....	2 75 to 3 75
common to fair.....do....	10 75 to 12 00	milch cows.....per head.	25 00 to 55 00
average of the marketdo....	— — to — —	calves.....per cental.	5 50 to 7 00
Texans.....do....	— — to — —	Sheep.....do....	4 50 to 6 00
milch cows.....do....	50 00 to 75 00	Swine, good to choice.....do....	8 50 to 8 75
veal calves.....do....	4 50 to 10 50	common to medium.do....	6 50 to 8 00
Sheep.....do....	5 50 to 7 50		
Swine.....do....	Few in market.	CHICAGO.	
PHILADELPHIA.		Cattle, extra graded steers, 1,400 to 1,600 pounds, per cental	6 40 to 6 90
Cattle, prime beeves....per cental.	7 50 to 8 00	choice beeves, 1,250 to 1,450 pounds, per cental.	5 85 to 6 25
fair to good.....do....	6 25 to 7 25	good beeves, 1,150 to 1,350 pounds, per cental.....	5 50 to 5 75
common.....do....	5 25 to 6 00	medium, 1,100 to 1,250 pounds, per cental.....	5 00 to 5 50
Sheep.....do....	4 50 to 7 75	inferior.....per cental.	3 00 to 5 00
Hogs, corn-fed.....do....	12 00 to 13 00	Texans.....do....	2 50 to 5 25
BALTIMORE.		Sheep.....do....	3 75 to 6 50
Cattle, best beeves.....per cental.	6 25 to 7 30	Swine.....do....	7 10 to 8 75
first quality.....do....	5 12 to 6 25	SAINT LOUIS.	
medium or good quality, per cental.....	4 62 to 5 12	Cattle, fair to choice native steers, per cental.....	5 00 to 6 25
ordinary.....per cental.	3 50 to 4 62	common to fair natives, per cental.....	3 50 to 4 75
general average.....do....	5 50 to — —	inferior to common, per cental	2 00 to 3 50
most of the sales.....do....	5 00 to 6 00	Texans, common to choice, per cental.....	1 75 to 4 00
milch-cows, fair to good, per cental.....	30 00 to 48 00	Sheep.....per cental.	4 00 to 6 25
Sheep.....per cental.	4 50 to 8 00	Swine.....do....	5 00 to 7 25
Swine.....do....	9 75 to 11 50		
CINCINNATI.			
Cattle, good to prime butchers' steers.....per cental.	5 50 to 6 25		

Live-stock Markets—Continued.

Articles.	Prices.	Articles.	Prices.
SAINT LOUIS—Continued.		NEW ORLEANS.	
Horses, plug.....per head.	$40 00 to $75 00	Cattle, Texas beeves, choice, per head.....	$40 00 to $46 00
plain.....do....	80 00 to 110 00	first quality.....per head.	30 00 to 35 00
street-car.....do....	75 00 to 125 00	second quality.....do....	20 00 to 25 00
heavy draught.....do....	130 00 to 170 00	western beeves..per cental.	3 00 to 7 50
good drivers.....do....	100 00 to 150 00	milch-cows.....per head.	35 00 to 100 00
extra.....do....	175 00 to 180 00	calves.....do....	7 00 to 9 00
Mules, 14 to 15 hands high...do....	75 00 to 120 00	Sheep, first quality.....do....	6 00 to 7 00
15 to 16 hands high...do....	120 00 to 180 00	second quality.....do....	3 00 to 4 00
extra.....do....	175 00 to 200 00	Swine.....do....	5 00 to 6 00

FOREIGN MARKETS.

The first half of March in the United Kingdom was all that could be desired for field-work, but the spring was considered backward, so far as vegetation was concerned. Everywhere warmth was greatly wanted for grain and meadows, but the growth had nowhere been affected by frost to an extent injurious to subsequent growth. The country markets were from 1*s.* to 2*s.* per quarter for wheat ahead of the London market, which showed considerable indecision in regard to further advances. In London it is observed that the sales of English wheat amounted to only a third of the arrivals. During the last week in March the sales amounted to 29,873 quarters in excess of those of the corresponding week of 1874, while prices averaged 19*s.* per quarter less. The financial necessities of farmers compel them to accept such prices. The Paris market was dull but steady, the provinces showing more buoyancy. Belgium, Holland, and Germany show a firmer hold on prices already obtained, a tendency also observable in Denmark and Hungary. Egypt was doing little in the way of export to weaken prices, while in New York there was an advance of 2*s.* 6*d.* per quarter. The large amount of cargoes bound for British ports—one and a half million quarters—will only suffice to bring up the aggregate receipts to last year's figures. If it could all be retained it would furnish six weeks' consumption, but a large portion will be reshipped to other countries. More than half the British crop has been marketed, and prices have evidently touched their lowest point. The increasing demand for a higher standard of living among the poorer classes of the English people causes an increased demand for wheat diet and counteracts the downward tendency of the market. The deficiencies of two short crops are not to be overcome by a single good one, and hence the late decline of prices is considered not as a permanent tendency but as a temporary reaction which has already reached its limits.

The sales of English wheat in the United Kingdom during the last week in March amounted to 67,153 quarters, at 41*s.* 9*d.*, against 37,280 quarters at 60*s.* 9*d.* in 1874. This fact is very significant to American wheat-farmers who look to the British Islands for a market for their products. These destructive variations in prices result from temporary and abnormal conditions, and hence can form no basis for a steady, remunerative demand. The London averages were 43*s.* 10*d.* on 1,955 quarters. The imports of the previous week into the United Kingdom amounted to 313,898 cwts. After March 19, sixteen cargoes of foreign wheat are noted, of which fifteen cargoes were disposed of at the following rates,

viz: Berdianski, 43*s.* to 45*s.* per quarter; Ghirka, 42*s.* to 44*s.*; California, 45*s.* to 45*s.* 6*d.*; Oregon, 47*s.* 3*d.*; American spring, No. 2, 41*s.* 6*d.*; Milwaukee, No. 2, 42*s.*

The last week in March in Mark Lane opened on moderate supplies of English wheat, with about double the quantity of foreign, principally red wheat from Marianopoli and New York, with some from Dantzig and Hamburg. The show of fresh samples from the near counties was quite limited and their condition moderately good. The continued short arrivals caused a firmness in the market for good samples, though poor and ill-conditioned lots were a drug.

In Mark Lane, London, Essex and Kent, white, brought 44*s.* to 49*s.* per quarter; ditto, red, 42*s.* to 44*s.*; Norfolk, Lincolnshire, and Yorkshire, 42*s.* to 44*s.* Of foreign wheats, Dantzic mixed brought 50*s.* to 54*s.*; Königsberg, 46*s.* to 53*s.*; Rostock, 44*s.* to 48*s.*; Silesian, red, 43*s.* to 49*s.*; Pomeranian, Mecklenberg, and Uckermark, red, 44*s.* to 46*s.*; Ghirka, 42*s.* to 43*s.*; Russian, hard, 40*s.* to 43*s.*; Saxonska, 43*s.* to 45*s.*; Danish and Holstein, red, 41*s.* to 47*s.*; American, 41*s.* to 43*s.*; Chilian, white, 49*s.*; Californian, 50*s.*; Australian, 50*s.* to 51*s.* In Liverpool, Canadian, white, was quoted at 9*s.* 3*d.* to 10*s.* per cental; American, white, 9*s.* 9*d.* to 10*s.* 2*d.*; ditto, red winter, 9*s.* 2*d.* to 9*s.* 6*d.*; ditto, No. 1, spring, 9*s.* to 9*s.* 2*d.*; ditto, No. 2, spring, 8*s.* 6*d.* to 8*s.* 10*d.*; Californian, 9*s.* 4*d.* to 9*s.* 10*d.*; Oregon, 9*s.* 10*d.* to 10*s.*; Chilian, 8*s.* 11*d.* to 9*s.* In Paris the wheat-trade was dull, quotations ranging from 39*s.* to 45*s.* per quarter. No complaints from the rural districts in regard to the growing wheat-crop. The French provincial markets showed a tendency to advance. Belgian farmers were disposed to hold on for higher prices in view of severe weather, the Brussels market being very firm at 46*s.* 6*d.* average for native. Growers near Hamburg were reported as holding still three-fourths of their previous crops, and an advance of 9*d.* per quarter was stated.

Flour.—The imports into the United Kingdom during the third week of March amounted to 94,296 hundred-weight. The subsequent week opened on a good supply of English flour, with a moderate supply of American in barrels. The latter showed increased transactions at previous rates. In Mark Lane, the best town-households brought 36*s.* to 40*s.* per sack of 280 pounds; best country-households, 30*s.* to 31*s.*; Norfolk and Suffolk, 27*s.* to 29*s.*; American, per barrel, 21*s.* to 25*s.* In Liverpool, English and Irish superfines were quoted at 30*s.* 6*d.* to 32*s.* 6*d.* per 280 pounds; ditto, extra, 33*s.* to 36*s.*; French, 35*s.* to 44*s.*; Trieste, 48*s.* to 60*s.*; Spanish, 33*s.* to 39*s.*; Chilian, 31*s.* 6*d.* to 35*s.*; Californian, 35*s.* to 36*s.*; American, western and extra, per barrel, 21*s.* to 23*s.*; Baltimore and Philadelphia, 21*s.* to 23*s.*; extra Canadian, 23*s.* 6*d.* to 26*s.* The Paris trade was slow at former prices, ranging from 30*s.* 1*d.* to 34*s.* per 280 pounds.

Maize.—With fair arrivals this grain had fallen 6*d.* per quarter in the British markets. On Wednesday, March 24, the market supplies aggregated 5,110 quarters. In Mark Lane, white brought from 37*s.* to 40*s.* per quarter; yellow, 34*s.* to 36*s.* In Liverpool, American new brought 33*s.* 6*d.* to 36*s.* per 280 pounds; Galatz, 37*s.* to 38*s.*